OANDA REST-V20 API Documentation

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oandapyV20 REST-V20 API wrapper

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CHAPTER 1

Introduction

The `oandapyV20` package offers an API to the OANDA V20 REST service. To use the REST-API-service you will need a *token* and an *account*. This applies for both *live* and *practice* accounts. For details check oanda.com.

1.1 Install

Install the pypi package with pip:

```
$ pip install oandapyV20
```

Or alternatively install the latest development version from github:

```
$ pip install git+https://github.com/hootnot/oanda-api-v20.git
```

You may consider using *virtualenv* to create isolated Python environments. Python 3.4 has *pyvenv* providing the same kind of functionality.

1.2 Download from Github

If you want to run the tests, download the source from github:

```
$ git clone https://github.com/hootnot/oanda-api-v20.git
$ cd oanda-api-v20
$ python setup.py test
$ python setup.py install
```

CHAPTER 2

Interface OANDA's REST-V20

2.1 The client

The `oandapyV20` package contains a client class, *oandapyV20.API*, to communicate with the REST-V20 interface. It processes requests that can be created from the endpoint classes. For it's communication it relies on: `requests` (requests).

The client keeps no state of a requests. The response of a request is assigned to the request instance. The response is also returned as a return value by the client.

class oandapyV20.**API**(*access_token*, *environment='practice'*, *headers=None*, *request_params=None*)

Bases: `object`

API - class to handle APIRequests objects to access API endpoints.

Examples

```
# get a list of trades
from oandapyV20 import API
import oandapyV20.endpoints.trades as trades

api = API(access_token="xxx")
accountID = "101-305-3091856-001"

r = trades.TradesList(accountID)
# show the endpoint as it is constructed for this call
print("REQUEST:{}".format(r))
rv = api.request(r)
print("RESPONSE:\n{}".format(json.dumps(rv, indent=2)))
```

Output:

```
REQUEST:v3/accounts/101-305-3091856-001/trades
RESPONSE:
"trades": [
    {
      "financing": "0.0000",
      "openTime": "2016-07-21T15:47:05.170212014Z",
      "price": "10133.9",
      "unrealizedPL": "8.0000",
      "realizedPL": "0.0000",
      "instrument": "DE30_EUR",
      "state": "OPEN",
      "initialUnits": "-10",
      "currentUnits": "-10",
      "id": "1032"
    },
    {
      "financing": "0.0000",
      "openTime": "2016-07-21T15:47:04.963590941Z",
      "price": "10134.4",
      "unrealizedPL": "13.0000",
      "realizedPL": "0.0000",
      "instrument": "DE30_EUR",
      "state": "OPEN",
      "initialUnits": "-10",
      "currentUnits": "-10",
      "id": "1030"
    }
  ],
  "lastTransactionID": "1040"
}
```

```python
# reduce a trade by it's id
from oandapyV20 import API
import oandapyV20.endpoints.trades as trades

api = API(access_token="...")

accountID = "101-305-3091856-001"
tradeID = "1030"
cfg = {"units": 5}
r = trades.TradeClose(accountID, tradeID=tradeID, data=cfg)
# show the endpoint as it is constructed for this call
print("REQUEST:{}".format(r))
rv = api.request(r)
print("RESPONSE\n{}".format(json.dumps(rv, indent=2)))
```

Output:

```
REQUEST:v3/accounts/101-305-3091856-001/trades/1030/close
RESPONSE: {
  "orderFillTransaction": {
    "orderID": "1041",
    "financing": "-0.1519",
    "instrument": "DE30_EUR",
    "userID": 1435156,
    "price": "10131.6",
    "tradeReduced": {
```

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```
      "units": "5",
      "financing": "-0.1519",
      "realizedPL": "14.0000",
      "tradeID": "1030"
    },
    "batchID": "1041",
    "accountBalance": "44876.2548",
    "reason": "MARKET_ORDER_TRADE_CLOSE",
    "time": "2016-07-21T17:32:51.361464739Z",
    "units": "5",
    "type": "ORDER_FILL",
    "id": "1042",
    "pl": "14.0000",
    "accountID": "101-305-3091856-001"
  },
  "orderCreateTransaction": {
    "timeInForce": "FOK",
    "positionFill": "REDUCE_ONLY",
    "userID": 1435156,
    "batchID": "1041",
    "instrument": "DE30_EUR",
    "reason": "TRADE_CLOSE",
    "tradeClose": {
      "units": "5",
      "tradeID": "1030"
    },
    "time": "2016-07-21T17:32:51.361464739Z",
    "units": "5",
    "type": "MARKET_ORDER",
    "id": "1041",
    "accountID": "101-305-3091856-001"
  },
  "relatedTransactionIDs": [
    "1041",
    "1042"
  ],
  "lastTransactionID": "1042"
}
```


__init__(*access_token*, *environment='practice'*, *headers=None*, *request_params=None*)

Instantiate an instance of OandaPy's API wrapper.

Parameters

- **access_token** (*string*) – Provide a valid access token.
- **environment** (*string*) – Provide the environment for OANDA's REST api. Valid values: 'practice' or 'live'. Default: 'practice'.
- **headers** (*dict (optional)*) – Provide request headers to be set for a request.

Note: There is no need to set the 'Content-Type: application/json' for the endpoints that require this header. The API-request classes covering those endpoints will take care of the header.

request_params [(optional)] parameters to be passed to the request. This can be used to apply for instance a timeout value:

request_params={"timeout": 0.1}

See specs of the requests module for full details of possible parameters.

> **Warning:** parameters belonging to a request need to be set on the requestinstance and are NOT passed via the client.

request (*endpoint*)
Perform a request for the APIRequest instance 'endpoint'.

Parameters **endpoint** (*APIRequest*) – The endpoint parameter contains an instance of an APIRequest containing the endpoint, method and optionally other parameters or body data.

Raises V20Error in case of HTTP response code >= 400

request_params
request_params property.

2.2 Exceptions

class oandapyV20.**V20Error** (*code, msg*)
Bases: exceptions.Exception

Generic error class.

In case of HTTP response codes >= 400 this class can be used to raise an exception representing that error.

__init__ (*code, msg*)
Instantiate a V20Error.

Parameters

- **code** (*int*) – the HTTP-code of the response
- **msg** (*str*) – the message returned with the response

2.3 Logging

The oandapyV20 package has *logging* integrated. Logging can be simply applied by enabling a *logger*. The example below will log INFO-level logging to the file *v20.log*. For details check the logger module in the standard Python documentation.

```
# code snippet
from oandapyV20 import API
import oandapyV20.endpoints.orders as orders
from oandapyV20.exceptions import V20Error
from exampleauth import exampleAuth
import logging

logging.basicConfig(
    filename="v20.log",
    level=logging.INFO,
    format='%(asctime)s [%(levelname)s] %(name)s : %(message)s',
)
```

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```
accountID, token = exampleAuth()
...
```

Resulting loglines:

```
2016-10-22 17:50:37,988 [INFO] oandapyV20.oandapyV20 : setting up API-client for␣
↪environment practice
2016-10-22 17:50:37,990 [INFO] oandapyV20.oandapyV20 : performing request https://api-
↪fxpractice.oanda.com/v3/accounts/101-004-1435156-001/orders
2016-10-22 17:50:37,998 [INFO] requests.packages.urllib3.connectionpool : Starting␣
↪new HTTPS connection (1): api-fxpractice.oanda.com
2016-10-22 17:50:38,866 [INFO] oandapyV20.oandapyV20 : performing request https://api-
↪fxpractice.oanda.com/v3/accounts/101-004-1435156-001/orders
2016-10-22 17:50:39,066 [ERROR] oandapyV20.oandapyV20 : request https://api-
↪fxpractice.oanda.com/v3/accounts/101-004-1435156-001/orders failed [400,{
↪"errorMessage":"Invalid value specified for 'order.instrument'"}]
```

CHAPTER 3

oandapyV20.endpoints

3.1 oandapyV20.endpoints.accounts

3.1.1 AccountChanges

class `oandapyV20.endpoints.accounts.`**`AccountChanges`**(*accountID*, *params=None*)

Bases: `oandapyV20.endpoints.accounts.Accounts`

AccountChanges.

Endpoint used to poll an Account for its current state and changes since a specified TransactionID.

ENDPOINT = 'v3/accounts/{accountID}/changes'

EXPECTED_STATUS = 200

METHOD = 'GET'

`__init__`(*accountID*, *params=None*)

Instantiate an AccountChanges request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **params** (*dict (optional)*) – query params to send, check developer.oanda.com for details.

Query Params example:

```
{
  "sinceTransactionID": 2308
}
```

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.accounts as accounts
```

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```
>>> client = oandapyV20.API(access_token=...)
>>> params = ...
>>> r = accounts.AccountChanges(accountID=..., params=params)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "state": {
    "trades": [],
    "marginCloseoutNAV": "33848.2663",
    "marginUsed": "0.0000",
    "marginAvailable": "33848.2663",
    "marginCallPercent": "0.00000",
    "NAV": "33848.2663",
    "marginCloseoutMarginUsed": "0.0000",
    "orders": [],
    "withdrawalLimit": "33848.2663",
    "marginCloseoutPercent": "0.00000",
    "positions": [],
    "unrealizedPL": "0.0000",
    "marginCallMarginUsed": "0.0000",
    "marginCloseoutUnrealizedPL": "0.0000",
    "positionValue": "0.0000"
  },
  "changes": {
    "tradesReduced": [],
    "tradesOpened": [],
    "ordersFilled": [],
    "tradesClosed": [],
    "transactions": [
      {
        "price": "1.20000",
        "stopLossOnFill": {
          "timeInForce": "GTC",
          "price": "1.22000"
        },
        "timeInForce": "GTC",
        "reason": "CLIENT_ORDER",
        "id": "2309",
        "batchID": "2309",
        "triggerCondition": "TRIGGER_DEFAULT",
        "positionFill": "DEFAULT",
        "userID": 1435156,
        "instrument": "EUR_USD",
        "time": "2016-10-25T21:07:21.065554321Z",
        "units": "-100",
        "type": "LIMIT_ORDER",
        "accountID": "101-004-1435156-001"
      }
    ],
    "ordersCreated": [
      {
        "partialFill": "DEFAULT_FILL",
        "price": "1.20000",
        "stopLossOnFill": {
```


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```
          "timeInForce": "GTC",
          "price": "1.22000"
        },
        "timeInForce": "GTC",
        "createTime": "2016-10-25T21:07:21.065554321Z",
        "triggerCondition": "TRIGGER_DEFAULT",
        "positionFill": "POSITION_DEFAULT",
        "id": "2309",
        "instrument": "EUR_USD",
        "state": "PENDING",
        "units": "-100",
        "type": "LIMIT"
      }
    ],
    "positions": [],
    "ordersTriggered": [],
    "ordersCancelled": []
  },
  "lastTransactionID": "2309"
}
```


3.1.2 AccountConfiguration

class oandapyV20.endpoints.accounts.**AccountConfiguration**(*accountID*, *data*)

Bases: `oandapyV20.endpoints.accounts.Accounts`

Set the client-configurable portions of an Account.

ENDPOINT = 'v3/accounts/{accountID}/configuration'

EXPECTED_STATUS = 200

HEADERS = {'Content-Type': 'application/json'}

METHOD = 'PATCH'

__init__(*accountID*, *data*)

Instantiate an AccountConfiguration request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **data** (*dict (required)*) – json body to send

body example:

```
{
  "marginRate": "0.05"
}
```

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.accounts as accounts
>>> client = oandapyV20.API(access_token=...)
>>> r = accounts.AccountConfiguration(accountID, data=data)
>>> client.request(r)
>>> print r.response
```

```
{
  "lastTransactionID": "830",
  "clientConfigureTransaction": {
    "userID": 1435156,
    "marginRate": "0.05",
    "batchID": "830",
    "time": "2016-07-12T19:48:11.657494168Z",
    "type": "CLIENT_CONFIGURE",
    "id": "830",
    "accountID": "101-004-1435156-001"
  }
}
```


3.1.3 AccountDetails

class oandapyV20.endpoints.accounts.**AccountDetails**(*accountID*)

Bases: `oandapyV20.endpoints.accounts.Accounts`

AccountDetails.

Get the full details for a single Account that a client has access to. Full pending Order, open Trade and open Position representations are provided.

ENDPOINT = 'v3/accounts/{accountID}'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID*)

Instantiate an AccountDetails request.

Parameters **accountID** (*string (required)*) – id of the account to perform the request on.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.accounts as accounts
>>> client = oandapyV20.API(access_token=...)
>>> r = accounts.AccountDetails(accountID)
>>> client.request(r)
>>> print r.response
```


```
{
  "account": {
    "positions": [
      {
        "short": {
          "units": "0",
          "resettablePL": "0.0000",
          "unrealizedPL": "0.0000",
          "pl": "0.0000"
        },
        "unrealizedPL": "0.0000",
        "long": {
          "units": "0",
          "resettablePL": "-3.8046",
          "unrealizedPL": "0.0000",
```


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```
          "pl": "-3.8046"
        },
        "instrument": "EUR_USD",
        "resettablePL": "-3.8046",
        "pl": "-3.8046"
      },
      {
        "short": {
          "unrealizedPL": "682.0000",
          "units": "-20",
          "resettablePL": "-1744.8000",
          "tradeIDs": [
            "821",
            "823"
          ],
          "averagePrice": "9984.7",
          "pl": "-1744.8000"
        },
        "unrealizedPL": "682.0000",
        "long": {
          "units": "0",
          "resettablePL": "447.6000",
          "unrealizedPL": "0.0000",
          "pl": "447.6000"
        },
        "instrument": "DE30_EUR",
        "resettablePL": "-1297.2000",
        "pl": "-1297.2000"
      }
    ],
    "unrealizedPL": "682.0000",
    "marginCloseoutNAV": "49393.6580",
    "marginUsed": "9948.9000",
    "currency": "EUR",
    "resettablePL": "-1301.0046",
    "NAV": "49377.6580",
    "marginCloseoutMarginUsed": "9949.8000",
    "id": "101-004-1435156-001",
    "marginCloseoutPositionValue": "198996.0000",
    "openTradeCount": 2,
    "orders": [
      {
        "partialFill": "DEFAULT_FILL",
        "price": "0.87000",
        "stopLossOnFill": {
          "timeInForce": "GTC",
          "price": "0.88000"
        },
        "timeInForce": "GTC",
        "clientExtensions": {
          "comment": "myComment",
          "id": "myID"
        },
        "id": "204",
        "triggerCondition": "TRIGGER_DEFAULT",
        "replacesOrderID": "200",
        "positionFill": "POSITION_DEFAULT",
```


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```
        "createTime": "2016-07-08T07:18:47.623211321Z",
        "instrument": "EUR_GBP",
        "state": "PENDING",
        "units": "-50000",
        "type": "LIMIT"
      }
    ],
    "openPositionCount": 1,
    "marginCloseoutPercent": "0.10072",
    "marginCallMarginUsed": "9949.8000",
    "hedgingEnabled": false,
    "positionValue": "198978.0000",
    "pl": "-1301.0046",
    "lastTransactionID": "833",
    "marginAvailable": "39428.7580",
    "marginRate": "0.05",
    "marginCallPercent": "0.20144",
    "pendingOrderCount": 1,
    "withdrawalLimit": "39428.7580",
    "trades": [
      {
        "instrument": "DE30_EUR",
        "financing": "0.0000",
        "openTime": "2016-07-12T09:32:18.062823776Z",
        "initialUnits": "-10",
        "currentUnits": "-10",
        "price": "9984.7",
        "unrealizedPL": "341.0000",
        "realizedPL": "0.0000",
        "state": "OPEN",
        "id": "821"
      },
      {
        "instrument": "DE30_EUR",
        "financing": "0.0000",
        "openTime": "2016-07-12T09:32:18.206929733Z",
        "initialUnits": "-10",
        "currentUnits": "-10",
        "price": "9984.7",
        "unrealizedPL": "341.0000",
        "realizedPL": "0.0000",
        "state": "OPEN",
        "id": "823"
      }
    ],
    "alias": "hootnotv20",
    "createdByUserID": 1435156,
    "marginCloseoutUnrealizedPL": "698.0000",
    "createdTime": "2016-06-24T21:03:50.914647476Z",
    "balance": "48695.6580"
  },
  "lastTransactionID": "833"
}
```

3.1.4 AccountInstruments

class oandapyV20.endpoints.accounts.**AccountInstruments**(*accountID*, *params=None*)
Bases: oandapyV20.endpoints.accounts.Accounts

AccountInstruments.

Get the list of tradable instruments for the given Account. The list of tradeable instruments is dependent on the regulatory division that the Account is located in, thus should be the same for all Accounts owned by a single user.

ENDPOINT = 'v3/accounts/{accountID}/instruments'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID*, *params=None*)
Instantiate an AccountInstruments request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **params** (*dict (optional)*) – query params to send, check developer.oanda.com for details.

Query Params example:

```
{
  "instruments": "EU50_EUR,EUR_USD,US30_USD,FR40_EUR,EUR_CHF,DE30_EUR"
}
```

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.accounts as accounts
>>> client = oandapyV20.API(access_token=...)
>>> params = ...
>>> r = accounts.AccountInstruments(accountID=..., params=params)
>>> client.request(r)
>>> print r.response
```

Output:

```
{
  "instruments": [
    {
      "marginRate": "0.05",
      "minimumTrailingStopDistance": "5.0",
      "maximumPositionSize": "0",
      "minimumTradeSize": "1",
      "displayName": "Europe 50",
      "name": "EU50_EUR",
      "displayPrecision": 1,
      "maximumTrailingStopDistance": "10000.0",
      "maximumOrderUnits": "3000",
      "tradeUnitsPrecision": 0,
      "pipLocation": 0,
      "type": "CFD"
    },
    {
```

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```
      "marginRate": "0.05",
      "minimumTrailingStopDistance": "0.00050",
      "maximumPositionSize": "0",
      "minimumTradeSize": "1",
      "displayName": "EUR/USD",
      "name": "EUR_USD",
      "displayPrecision": 5,
      "maximumTrailingStopDistance": "1.00000",
      "maximumOrderUnits": "100000000",
      "tradeUnitsPrecision": 0,
      "pipLocation": -4,
      "type": "CURRENCY"
    },
    {
      "marginRate": "0.05",
      "minimumTrailingStopDistance": "5.0",
      "maximumPositionSize": "0",
      "minimumTradeSize": "1",
      "displayName": "US Wall St 30",
      "name": "US30_USD",
      "displayPrecision": 1,
      "maximumTrailingStopDistance": "10000.0",
      "maximumOrderUnits": "1000",
      "tradeUnitsPrecision": 0,
      "pipLocation": 0,
      "type": "CFD"
    },
    {
      "marginRate": "0.05",
      "minimumTrailingStopDistance": "5.0",
      "maximumPositionSize": "0",
      "minimumTradeSize": "1",
      "displayName": "France 40",
      "name": "FR40_EUR",
      "displayPrecision": 1,
      "maximumTrailingStopDistance": "10000.0",
      "maximumOrderUnits": "2000",
      "tradeUnitsPrecision": 0,
      "pipLocation": 0,
      "type": "CFD"
    },
    {
      "marginRate": "0.05",
      "minimumTrailingStopDistance": "0.00050",
      "maximumPositionSize": "0",
      "minimumTradeSize": "1",
      "displayName": "EUR/CHF",
      "name": "EUR_CHF",
      "displayPrecision": 5,
      "maximumTrailingStopDistance": "1.00000",
      "maximumOrderUnits": "100000000",
      "tradeUnitsPrecision": 0,
      "pipLocation": -4,
      "type": "CURRENCY"
    },
    {
      "marginRate": "0.05",
```


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```
      "minimumTrailingStopDistance": "5.0",
      "maximumPositionSize": "0",
      "minimumTradeSize": "1",
      "displayName": "Germany 30",
      "name": "DE30_EUR",
      "displayPrecision": 1,
      "maximumTrailingStopDistance": "10000.0",
      "maximumOrderUnits": "2500",
      "tradeUnitsPrecision": 0,
      "pipLocation": 0,
      "type": "CFD"
    }
  ],
  "lastTransactionID": "2124"
}
```


3.1.5 AccountList

class oandapyV20.endpoints.accounts.**AccountList**

Bases: oandapyV20.endpoints.accounts.Accounts

Get a list of all Accounts authorized for the provided token.

ENDPOINT = 'v3/accounts'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__()

Instantiate an AccountList request.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.accounts as accounts
>>> client = oandapyV20.API(access_token=...)
>>> r = accounts.AccountList()
>>> client.request(r)
>>> print r.response
```


```
{
  "accounts": [
    {
      "id": "101-004-1435156-002",
      "tags": []
    },
    {
      "id": "101-004-1435156-001",
      "tags": []
    }
  ]
}
```

3.1.6 AccountSummary

class oandapyV20.endpoints.accounts.**AccountSummary**(*accountID*)

Bases: oandapyV20.endpoints.accounts.Accounts

Get a summary for a single Account that a client has access to.

ENDPOINT = 'v3/accounts/{accountID}/summary'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID*)

Instantiate an AccountSummary request.

Parameters **accountID** (*string (required)*) – id of the account to perform the request on.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.accounts as accounts
>>> client = oandapyV20.API(access_token=...)
>>> r = accounts.AccountSummary(accountID)
>>> client.request(r)
>>> print r.response
```


```
{
  "account": {
    "marginCloseoutNAV": "35454.4740",
    "marginUsed": "10581.5000",
    "currency": "EUR",
    "resettablePL": "-13840.3525",
    "NAV": "35454.4740",
    "marginCloseoutMarginUsed": "10581.5000",
    "marginCloseoutPositionValue": "211630.0000",
    "openTradeCount": 2,
    "id": "101-004-1435156-001",
    "hedgingEnabled": false,
    "marginCloseoutPercent": "0.14923",
    "marginCallMarginUsed": "10581.5000",
    "openPositionCount": 1,
    "positionValue": "211630.0000",
    "pl": "-13840.3525",
    "lastTransactionID": "2123",
    "marginAvailable": "24872.9740",
    "marginRate": "0.05",
    "marginCallPercent": "0.29845",
    "pendingOrderCount": 0,
    "withdrawalLimit": "24872.9740",
    "unrealizedPL": "0.0000",
    "alias": "hootnotv20",
    "createdByUserID": 1435156,
    "marginCloseoutUnrealizedPL": "0.0000",
    "createdTime": "2016-06-24T21:03:50.914647476Z",
    "balance": "35454.4740"
  },
  "lastTransactionID": "2123"
}
```

3.2 oandapyV20.endpoints.forexlabs

3.2.1 Autochartist

class `oandapyV20.endpoints.forexlabs.`**`Autochartist`**(*params=None*)

Bases: `oandapyV20.endpoints.forexlabs.ForexLabs`

Autochartist.

Get the 'autochartist data'.

ENDPOINT = 'labs/v1/signal/autochartist'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*params=None*)

Instantiate an Autochartist request.

Parameters params (*dict (optional)*) – query params to send, check developer.oanda.com for details.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.forexlabs as labs
>>> accountID = ...
>>> client = oandapyV20.API(access_token=...)
>>> params =
        {
          "instrument": "EUR_JPY"
        }
```

```
>>> r = labs.Autochartist(params=params)
>>> client.request(r)
>>> print(r.response)
```

Output:


```
{
  "signals": [
    {
      "data": {
        "points": {
          "support": {
            "y1": 0.72456,
            "y0": 0.725455,
            "x0": 1520420400,
            "x1": 1520503200
          },
          "resistance": {
            "y1": 0.729755,
            "y0": 0.731095,
            "x0": 1520323200,
            "x1": 1520463600
          }
        },
        "patternendtime": 1520589600,
        "prediction": {
```


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```
                "pricelow": 0.7316,
                "timefrom": 1520589600,
                "pricehigh": 0.7349,
                "timeto": 1520773200
            }
        },
        "meta": {
          "direction": 1,
          "completed": 1,
          "probability": 72.36,
          "scores": {
            "clarity": 7,
            "breakout": 10,
            "quality": 8,
            "initialtrend": 10,
            "uniformity": 6
          },
          "pattern": "Channel Down",
          "historicalstats": {
            "hourofday": {
              "total": 1909,
              "percent": 71.08,
              "correct": 1357
            },
            "pattern": {
              "total": 3361,
              "percent": 73.61,
              "correct": 2474
            },
            "symbol": {
              "total": 429,
              "percent": 65.5,
              "correct": 281
            }
          },
          "interval": 60,
          "trendtype": "Continuation",
          "length": 73
        },
        "type": "chartpattern",
        "id": 458552738,
        "instrument": "NZD_USD"
      }
  ],
  "provider": "autochartist"
}
```


3.2.2 Calendar

class `oandapyV20.endpoints.forexlabs.`**`Calendar`**(*params*)

Bases: `oandapyV20.endpoints.forexlabs.ForexLabs`

Calendar.

Get calendar information.

ENDPOINT = 'labs/v1/calendar'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*params*)

Instantiate a Calendar request.

Parameters params (*dict (required)*) – query params to send, check developer.oanda.com for details.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.forexlabs as labs
>>> accountID = ...
>>> client = oandapyV20.API(access_token=...)
>>> params =
        {
          "instrument": "EUR_USD",
          "period": 86400
        }
```

```
>>> r = labs.Calendar(params=params)
>>> client.request(r)
>>> print(r.response)
```

Output:


```
[
  {
    "impact": 3,
    "currency": "USD",
    "actual": "60.8",
    "market": "58.7",
    "title": "ISM Manufacturing",
    "timestamp": 1519916400,
    "region": "americas",
    "previous": "59.1",
    "unit": "index",
    "forecast": "59.5"
  }
]
```


3.2.3 CommitmentsOfTraders

class oandapyV20.endpoints.forexlabs.**CommitmentsOfTraders**(*params*)

Bases: oandapyV20.endpoints.forexlabs.ForexLabs

CommitmentsOfTraders.

Get the 'commitments of traders' information for an instrument.

ENDPOINT = 'labs/v1/commitments_of_traders'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*params*)

Instantiate a CommitmentsOfTraders request.

Parameters **params** (*dict (required)*) – query params to send, check developer.oanda.com for details.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.forexlabs as labs
>>> accountID = ...
>>> client = oandapyV20.API(access_token=...)
>>> params =
        {
          "instrument": "EUR_USD"
        }
```

```
>>> r = labs.CommitmentOfTraders(params=params)
>>> client.request(r)
>>> print(r.response)
```

Output:


```
{
  "EUR_USD": [
    {
      "oi": "603460",
      "price": "1.2315925",
      "ncs": "109280",
      "ncl": "258022",
      "date": 1517288400,
      "unit": "Contracts Of EUR 125,000"
    },
    {
      "oi": "596937",
      "price": "1.2364",
      "ncs": "110546",
      "ncl": "251369",
      "date": 1517893200,
      "unit": "Contracts Of EUR 125,000"
    },
    {
      "oi": "564233",
      "price": "1.2330275",
      "ncs": "103496",
      "ncl": "230785",
      "date": 1518498000,
      "unit": "Contracts Of EUR 125,000"
    },
    {
      "oi": "567534",
      "price": "1.2346025",
      "ncs": "103147",
      "ncl": "229273",
      "date": 1519102800,
      "unit": "Contracts Of EUR 125,000"
    },
    {
      "oi": "567463",
      "price": "1.23557",
      "ncs": "100310",
      "ncl": "238287",
      "date": 1519707600,
```


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```
      "unit": "Contracts Of EUR 125,000"
    }
  ]
}
```


3.2.4 HistoricalPositionRatios

class oandapyV20.endpoints.forexlabs.**HistoricalPositionRatios**(*params*)

Bases: oandapyV20.endpoints.forexlabs.ForexLabs

HistoricalPositionRatios.

Get the historical positionratios for an instrument.

ENDPOINT = 'labs/v1/historical_position_ratios'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*params*)

Instantiate a HistoricalPositionRatios request.

Parameters params (*dict (required)*) – query params to send, check developer.oanda.com for details.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.forexlabs as labs
>>> accountID = ...
>>> client = oandapyV20.API(access_token=...)
>>> params =
        {
          "instrument": "EUR_USD",
          "period": 86400
        }
```

```
>>> r = labs.HistoricalPositionRatios(params=params)
>>> client.request(r)
>>> print(r.response)
```

Output:


```
{
  "data": {
    "EUR_USD": {
      "data": [
        [
          1519924801,
          44.22,
          1.2209
        ],
        [
          1519926001,
          44.33,
          1.221
        ],
        [
```


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```
      1519927200,
      44.16,
      1.2212
    ],
    [
      1519928400,
      44.2,
      1.2209
    ],
    [
      1519929601,
      43.88,
      1.2201
    ],
    [
      1519930800,
      44.15,
      1.2197
    ],
    [
      1519932000,
      44.51,
      1.2204
    ],
    [
      1519933200,
      44.55,
      1.2233
    ],
    [
      1519934401,
      44.55,
      1.2254
    ],
    [
      1519935601,
      44.08,
      1.226
    ],
    [
      1519936801,
      43.67,
      1.2264
    ],
    [
      1519938001,
      43.55,
      1.2263
    ],
    [
      1519939201,
      43.25,
      1.2261
    ],
    [
      1519940401,
      43.28,
```


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```
            1.2263
          ],
          [
            1519941601,
            43.39,
            1.2267
          ],
          [
            1519942801,
            43.69,
            1.227
          ],
          [
            1519944001,
            43.57,
            1.2269
          ],
          [
            1519945201,
            43.68,
            1.2272
          ],
          [
            1519946400,
            43.51,
            1.2268
          ],
          [
            1519947601,
            43.53,
            1.2267
          ],
          [
            1519948801,
            43.71,
            1.2271
          ],
          [
            1519950001,
            43.66,
            1.2265
          ],
          [
            1519951201,
            43.78,
            1.2269
          ],
          [
            1519952401,
            43.86,
            1.2273
          ],
          [
            1519953600,
            43.85,
            1.2273
          ],
```


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```
        [
          1519954800,
          43.81,
          1.2271
        ],
        [
          1519956001,
          44,
          1.2275
        ],
        [
          1519957200,
          43.89,
          1.2274
        ],
        [
          1519958401,
          43.95,
          1.2273
        ],
        [
          1519959601,
          43.93,
          1.2273
        ],
        [
          1519960800,
          43.86,
          1.2276
        ],
        [
          1519962000,
          44.02,
          1.2278
        ],
        [
          1519963200,
          44.18,
          1.228
        ],
        [
          1519964401,
          44.52,
          1.2283
        ],
        [
          1519965600,
          44.19,
          1.2281
        ],
        [
          1519966801,
          44.14,
          1.2278
        ],
        [
          1519968000,
```


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```
      43.93,
      1.2276
    ],
    [
      1519969201,
      43.82,
      1.2277
    ],
    [
      1519970401,
      43.77,
      1.2279
    ],
    [
      1519971601,
      43.02,
      1.2269
    ],
    [
      1519972801,
      42.99,
      1.2265
    ],
    [
      1519974001,
      42.73,
      1.2263
    ],
    [
      1519975201,
      42.22,
      1.2262
    ],
    [
      1519976400,
      42.13,
      1.2255
    ],
    [
      1519977601,
      42.02,
      1.2263
    ],
    [
      1519978801,
      42.15,
      1.2261
    ],
    [
      1519980000,
      42.5,
      1.2273
    ],
    [
      1519981201,
      42.2,
      1.2274
```


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```
        ],
        [
          1519982400,
          42.06,
          1.2271
        ],
        [
          1519983600,
          42.38,
          1.2279
        ],
        [
          1519984800,
          42.29,
          1.2276
        ],
        [
          1519986000,
          42.16,
          1.2281
        ],
        [
          1519987201,
          43.46,
          1.2291
        ],
        [
          1519988401,
          43.51,
          1.2291
        ],
        [
          1519989601,
          43.4,
          1.2317
        ],
        [
          1519990800,
          43.46,
          1.2317
        ],
        [
          1519992001,
          43.07,
          1.2304
        ],
        [
          1519993201,
          43.56,
          1.2316
        ],
        [
          1519994401,
          43.75,
          1.2319
        ],
        [
```


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```
          1519995601,
          43.15,
          1.2308
        ],
        [
          1519996801,
          42.94,
          1.2309
        ],
        [
          1519998001,
          42.99,
          1.2315
        ],
        [
          1519999201,
          42.33,
          1.2309
        ],
        [
          1520000400,
          41.93,
          1.2299
        ],
        [
          1520001601,
          42.31,
          1.2303
        ],
        [
          1520002801,
          42.5,
          1.2313
        ],
        [
          1520004000,
          42.8,
          1.2326
        ],
        [
          1520005201,
          42.67,
          1.2317
        ],
        [
          1520006401,
          42.29,
          1.2309
        ],
        [
          1520007600,
          42.33,
          1.2309
        ],
        [
          1520008800,
          42.63,
```

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```
            1.2321
          ],
          [
            1520010001,
            42.11,
            1.2314
          ]
        ],
        "label": "EUR/USD"
      }
    }
}
```


3.2.5 OrderbookData

class oandapyV20.endpoints.forexlabs.**OrderbookData**(*params*)
Bases: oandapyV20.endpoints.forexlabs.ForexLabs

OrderbookData.

Get the 'orderbook data' for an instrument.

ENDPOINT = 'labs/v1/orderbook_data'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*params*)
Instantiate an OrderbookData request.

Parameters params (*dict (required)*) – query params to send, check developer.oanda.com for details.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.forexlabs as labs
>>> accountID = ...
>>> client = oandapyV20.API(access_token=...)
>>> params =
        {
          "instrument": "EUR_USD",
          "period": 3600
        }
```

```
>>> r = labs.CommitmentOfTraders(params=params)
>>> client.request(r)
>>> print(r.response)
```

Output:


```
{
  "1520066400": {
    "rate": 1.2318,
    "price_points": {
      "1.23": {
        "ps": 1.2155,
        "ol": 0.3871,
```


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```
        "os": 0.2615,
        "pl": 0.5633
      },
      "1.223": {
        "ps": 1.1266,
        "ol": 0.5021,
        "os": 0.2197,
        "pl": 0.3854
      },
      "1.288": {
        "ps": 0,
        "ol": 0.0105,
        "os": 0.0105,
        "pl": 0
      },
      "1.22": {
        "ps": 0.9191,
        "ol": 0.6486,
        "os": 0.136,
        "pl": 0.2965
      },
      "1.2245": {
        "ps": 0.5336,
        "ol": 0.5021,
        "os": 0.3975,
        "pl": 0.4447
      },
      "1.1825": {
        "ps": 0.1779,
        "ol": 0.1465,
        "os": 0.0628,
        "pl": 0
      },
      "1.2085": {
        "ps": 0.1482,
        "ol": 0.2092,
        "os": 0.2197,
        "pl": 0.1482
      },
      "1.26": {
        "ps": 0,
        "ol": 0.2197,
        "os": 0.68,
        "pl": 0
      },
      "1.25": {
        "ps": 0.0593,
        "ol": 0.272,
        "os": 1.0566,
        "pl": 0.1186
      },
      "1.24": {
        "ps": 0.1186,
        "ol": 0.4289,
        "os": 0.8264,
        "pl": 0.4447
      }
```


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```
      }
    }
}
```

3.2.6 Spreads

class oandapyV20.endpoints.forexlabs.**Spreads**(*params*)

Bases: oandapyV20.endpoints.forexlabs.ForexLabs

Spreads.

Get the spread information for an instrument.

ENDPOINT = 'labs/v1/spreads'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*params*)

Instantiate a Spreads request.

Parameters params (*dict (required)*) – query params to send, check developer.oanda.com for details.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.forexlabs as labs
>>> accountID = ...
>>> client = oandapyV20.API(access_token=...)
>>> params =
        {
          "instrument": "EUR_USD",
          "period": 57600
        }
```

```
>>> r = labs.Spreads(params=params)
>>> client.request(r)
>>> print(r.response)
```

Output:

```
{
  "max": [
    [
      1520028000,
      6
    ]
  ],
  "avg": [
    [
      1520028000,
      3.01822
    ]
  ],
  "min": [
    [
      1520028000,
```

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```
      1.7
    ]
  ]
}
```

3.3 oandapyV20.endpoints.instruments

3.3.1 InstrumentsCandles

class oandapyV20.endpoints.instruments.**InstrumentsCandles**(*instrument*, *params=None*)

Bases: oandapyV20.endpoints.instruments.Instruments

Get candle data for a specified Instrument.

ENDPOINT = 'v3/instruments/{instrument}/candles'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*instrument*, *params=None*)

Instantiate an InstrumentsCandles request.

Parameters

- **instrument** (*string (required)*) – the instrument to fetch candle data for
- **params** (*dict*) – optional request query parameters, check developer.oanda.com for details

Params example:

```
{
  "count": 5,
  "granularity": "M5"
}
```

Candle data example:

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.instruments as instruments
>>> client = oandapyV20.API(access_token=...)
>>> params = ...
>>> r = instruments.InstrumentsCandles(instrument="DE30_EUR",
>>>                                    params=params)
>>> client.request(r)
>>> print r.response
```

Output:

```
{
  "candles": [
    {
      "volume": 132,
      "mid": {
```

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```
        "h": "10508.0",
        "c": "10506.0",
        "l": "10503.8",
        "o": "10503.8"
      },
      "complete": true,
      "time": "2016-10-17T19:35:00.000000000Z"
    },
    {
      "volume": 162,
      "mid": {
        "h": "10507.0",
        "c": "10504.9",
        "l": "10502.0",
        "o": "10506.0"
      },
      "complete": true,
      "time": "2016-10-17T19:40:00.000000000Z"
    },
    {
      "volume": 196,
      "mid": {
        "h": "10509.8",
        "c": "10505.0",
        "l": "10502.6",
        "o": "10504.9"
      },
      "complete": true,
      "time": "2016-10-17T19:45:00.000000000Z"
    },
    {
      "volume": 153,
      "mid": {
        "h": "10510.1",
        "c": "10509.0",
        "l": "10504.2",
        "o": "10505.0"
      },
      "complete": true,
      "time": "2016-10-17T19:50:00.000000000Z"
    },
    {
      "volume": 172,
      "mid": {
        "h": "10509.8",
        "c": "10507.8",
        "l": "10503.2",
        "o": "10509.0"
      },
      "complete": true,
      "time": "2016-10-17T19:55:00.000000000Z"
    }
  ],
  "granularity": "M5",
  "instrument": "DE30/EUR"
}
```

3.3.2 InstrumentsOrderBook

class oandapyV20.endpoints.instruments.**InstrumentsOrderBook**(*instrument*, *params=None*)

Bases: oandapyV20.endpoints.instruments.Instruments

Get orderbook data for a specified Instrument.

ENDPOINT = 'v3/instruments/{instrument}/orderBook'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*instrument*, *params=None*)

Instantiate an InstrumentsOrderBook request.

Parameters

- **instrument** (*string (required)*) – the instrument to fetch candle data for
- **params** (*dict*) – optional request query parameters, check developer.oanda.com for details

Params example:

```
{}
```

OrderBook data example:

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.instruments as instruments
>>> client = oandapyV20.API(access_token=...)
>>> params = ...
>>> r = instruments.InstrumentsOrderBook(instrument="EUR_USD",
>>>                                      params=params)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "orderBook": {
    "instrument": "EUR_USD",
    "buckets": [
      {
        "price": "1.12850",
        "shortCountPercent": "0.2352",
        "longCountPercent": "0.2666"
      },
      {
        "price": "1.12900",
        "shortCountPercent": "0.2195",
        "longCountPercent": "0.3293"
      },
      {
        "price": "1.12950",
        "shortCountPercent": "0.3136",
        "longCountPercent": "0.2901"
      },
      {
```


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```
      "price": "1.13000",
      "shortCountPercent": "0.3842",
      "longCountPercent": "0.4156"
    },
    {
      "price": "1.13050",
      "shortCountPercent": "0.1960",
      "longCountPercent": "0.3685"
    },
    {
      "price": "1.13100",
      "shortCountPercent": "0.2431",
      "longCountPercent": "0.2901"
    },
    {
      "price": "1.13150",
      "shortCountPercent": "0.2509",
      "longCountPercent": "0.3136"
    },
    {
      "price": "1.13200",
      "shortCountPercent": "0.2587",
      "longCountPercent": "0.3450"
    },
    {
      "price": "1.13250",
      "shortCountPercent": "0.3842",
      "longCountPercent": "0.2666"
    },
    {
      "price": "1.13300",
      "shortCountPercent": "0.3371",
      "longCountPercent": "0.3371"
    },
    {
      "price": "1.13350",
      "shortCountPercent": "0.3528",
      "longCountPercent": "0.2744"
    },
    {
      "price": "1.13400",
      "shortCountPercent": "0.3842",
      "longCountPercent": "0.3136"
    },
    {
      "price": "1.13450",
      "shortCountPercent": "0.2039",
      "longCountPercent": "0.2744"
    },
    {
      "price": "1.13500",
      "shortCountPercent": "0.1882",
      "longCountPercent": "0.3371"
    },
    {
      "price": "1.13550",
      "shortCountPercent": "0.0235",
```


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```
        "longCountPercent": "0.0392"
      },
      {
        "price": "1.13600",
        "shortCountPercent": "0.0549",
        "longCountPercent": "0.0314"
      },
      {
        "price": "1.13650",
        "shortCountPercent": "0.1333",
        "longCountPercent": "0.0314"
      },
      {
        "price": "1.13700",
        "shortCountPercent": "0.1176",
        "longCountPercent": "0.1019"
      },
      {
        "price": "1.13750",
        "shortCountPercent": "0.1568",
        "longCountPercent": "0.0784"
      },
      {
        "price": "1.13800",
        "shortCountPercent": "0.1176",
        "longCountPercent": "0.0862"
      },
      {
        "price": "1.13850",
        "shortCountPercent": "0.2117",
        "longCountPercent": "0.1960"
      },
      {
        "price": "1.13900",
        "shortCountPercent": "0.4548",
        "longCountPercent": "0.2587"
      },
      {
        "price": "1.13950",
        "shortCountPercent": "0.2979",
        "longCountPercent": "0.3215"
      },
      {
        "price": "1.14000",
        "shortCountPercent": "0.7449",
        "longCountPercent": "0.2901"
      },
      {
        "price": "1.14050",
        "shortCountPercent": "0.2117",
        "longCountPercent": "0.1176"
      },
      {
        "price": "1.14100",
        "shortCountPercent": "0.1960",
        "longCountPercent": "0.1333"
      },
```


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```
      {
        "price": "1.14150",
        "shortCountPercent": "0.1882",
        "longCountPercent": "0.1176"
      }
    ],
    "time": "2017-06-28T10:00:00Z",
    "price": "1.13609",
    "bucketWidth": "0.00050"
  }
}
```


3.3.3 InstrumentsPositionBook

class oandapyV20.endpoints.instruments.**InstrumentsPositionBook**(*instrument*, *params=None*)

Bases: `oandapyV20.endpoints.instruments.Instruments`

Get positionbook data for a specified Instrument.

ENDPOINT = 'v3/instruments/{instrument}/positionBook'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*instrument*, *params=None*)

Instantiate an InstrumentsPositionBook request.

Parameters

- **instrument** (*string (required)*) – the instrument to fetch candle data for
- **params** (*dict*) – optional request query parameters, check developer.oanda.com for details

Params example:

```
{}
```

PositionBook data example:

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.instruments as instruments
>>> client = oandapyV20.API(access_token=...)
>>> params = ...
>>> r = instruments.InstrumentsPositionBook(instrument="EUR_USD",
>>>                                          params=params)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "positionBook": {
    "instrument": "EUR_USD",
    "buckets": [
      {
```


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```
        "price": "1.12800",
        "shortCountPercent": "0.2670",
        "longCountPercent": "0.2627"
      },
      {
        "price": "1.12850",
        "shortCountPercent": "0.2034",
        "longCountPercent": "0.2712"
      },
      {
        "price": "1.12900",
        "shortCountPercent": "0.2034",
        "longCountPercent": "0.2161"
      },
      {
        "price": "1.12950",
        "shortCountPercent": "0.2670",
        "longCountPercent": "0.2839"
      },
      {
        "price": "1.13000",
        "shortCountPercent": "0.2755",
        "longCountPercent": "0.3221"
      },
      {
        "price": "1.13050",
        "shortCountPercent": "0.1949",
        "longCountPercent": "0.2839"
      },
      {
        "price": "1.13100",
        "shortCountPercent": "0.2288",
        "longCountPercent": "0.2712"
      },
      {
        "price": "1.13150",
        "shortCountPercent": "0.2416",
        "longCountPercent": "0.2712"
      },
      {
        "price": "1.13200",
        "shortCountPercent": "0.2204",
        "longCountPercent": "0.3178"
      },
      {
        "price": "1.13250",
        "shortCountPercent": "0.2543",
        "longCountPercent": "0.2458"
      },
      {
        "price": "1.13300",
        "shortCountPercent": "0.2839",
        "longCountPercent": "0.2585"
      },
      {
        "price": "1.13350",
        "shortCountPercent": "0.3602",
```


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```
        "longCountPercent": "0.3094"
      },
      {
        "price": "1.13400",
        "shortCountPercent": "0.2882",
        "longCountPercent": "0.3560"
      },
      {
        "price": "1.13450",
        "shortCountPercent": "0.2500",
        "longCountPercent": "0.3009"
      },
      {
        "price": "1.13500",
        "shortCountPercent": "0.1738",
        "longCountPercent": "0.3475"
      },
      {
        "price": "1.13550",
        "shortCountPercent": "0.2119",
        "longCountPercent": "0.2797"
      },
      {
        "price": "1.13600",
        "shortCountPercent": "0.1483",
        "longCountPercent": "0.3094"
      },
      {
        "price": "1.13650",
        "shortCountPercent": "0.1483",
        "longCountPercent": "0.1314"
      },
      {
        "price": "1.13700",
        "shortCountPercent": "0.1568",
        "longCountPercent": "0.2034"
      },
      {
        "price": "1.13750",
        "shortCountPercent": "0.1398",
        "longCountPercent": "0.1271"
      },
      {
        "price": "1.13800",
        "shortCountPercent": "0.1314",
        "longCountPercent": "0.2034"
      },
      {
        "price": "1.13850",
        "shortCountPercent": "0.1483",
        "longCountPercent": "0.1695"
      },
      {
        "price": "1.13900",
        "shortCountPercent": "0.2924",
        "longCountPercent": "0.1653"
      },
```


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```
      {
        "price": "1.13950",
        "shortCountPercent": "0.1526",
        "longCountPercent": "0.1865"
      },
      {
        "price": "1.14000",
        "shortCountPercent": "0.4365",
        "longCountPercent": "0.2034"
      },
      {
        "price": "1.14050",
        "shortCountPercent": "0.1398",
        "longCountPercent": "0.1144"
      }
    ],
    "time": "2017-06-28T10:00:00Z",
    "price": "1.13609",
    "bucketWidth": "0.00050"
  }
}
```


3.4 oandapyV20.endpoints.orders

3.4.1 OrderCancel

class oandapyV20.endpoints.orders.**OrderCancel**(*accountID*, *orderID*)

Bases: oandapyV20.endpoints.orders.Orders

Cancel a pending Order in an Account.

ENDPOINT = 'v3/accounts/{accountID}/orders/{orderID}/cancel'

EXPECTED_STATUS = 200

METHOD = 'PUT'

__init__(*accountID*, *orderID*)

Instantiate an OrdersCancel request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **orderID** (*string (required)*) – id of the account to perform the request on.

Example:

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.orders as orders
>>> client = oandapyV20.API(access_token=...)
>>> r = orders.OrderCancel(accountID= ..., orderID=...)
>>> client.request(r)
>>> print r.response
```

Output:

```
{
  "orderCancelTransaction": {
    "orderID": "2307",
    "clientOrderID": "myID",
    "reason": "CLIENT_REQUEST",
    "batchID": "2308",
    "time": "2016-10-25T20:53:03.789670387Z",
    "type": "ORDER_CANCEL",
    "userID": 1435156,
    "id": "2308",
    "accountID": "101-004-1435156-001"
  },
  "lastTransactionID": "2308",
  "relatedTransactionIDs": [
    "2308"
  ]
}
```


3.4.2 OrderClientExtensions

class oandapyV20.endpoints.orders.**OrderClientExtensions**(*accountID*, *orderID*, *data*)

Bases: oandapyV20.endpoints.orders.Orders

Update the Client Extensions for an Order in an Account.

Warning: Do not set, modify or delete clientExtensions if your account is associated with MT4.

ENDPOINT = 'v3/accounts/{accountID}/orders/{orderID}/clientExtensions'

EXPECTED_STATUS = 200

HEADERS = {'Content-Type': 'application/json'}

METHOD = 'PUT'

__init__(*accountID*, *orderID*, *data*)

Instantiate an OrderCreate request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **orderID** (*string (required)*) – id of the order to perform the request on.
- **data** (*JSON (required)*) – json orderbody to send

Orderbody example:


```
{
  "clientExtensions": {
    "comment": "myComment",
    "id": "myID"
  }
}
```

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.orders as orders
>>> client = oandapyV20.API(access_token=...)
>>> r = orders.OrderClientExtensions(accountID, orderID, data=data)
>>> client.request(r)
>>> print r.response
```

```
{
  "lastTransactionID": "2305",
  "orderClientExtensionsModifyTransaction": {
    "orderID": "2304",
    "batchID": "2305",
    "clientExtensionsModify": {
      "comment": "myComment",
      "id": "myID"
    },
    "time": "2016-10-25T15:56:43.075594239Z",
    "type": "ORDER_CLIENT_EXTENSIONS_MODIFY",
    "userID": 1435156,
    "id": "2305",
    "accountID": "101-004-1435156-001"
  },
  "relatedTransactionIDs": [
    "2305"
  ]
}
```

3.4.3 OrderCreate

class oandapyV20.endpoints.orders.**OrderCreate**(*accountID*, *data*)

Bases: oandapyV20.endpoints.orders.Orders

Create an Order for an Account.

ENDPOINT = 'v3/accounts/{accountID}/orders'

EXPECTED_STATUS = 201

HEADERS = {'Content-Type': 'application/json'}

METHOD = 'POST'

__init__(*accountID*, *data*)

Instantiate an OrderCreate request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **data** (*JSON (required)*) – json orderbody to send

Orderbody example:

```
{
  "order": {
    "price": "1.2",
    "stopLossOnFill": {
      "timeInForce": "GTC",
      "price": "1.22"
```

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```
    },
    "timeInForce": "GTC",
    "instrument": "EUR_USD",
    "units": "-100",
    "type": "LIMIT",
    "positionFill": "DEFAULT"
  }
}
```


```
>>> import oandapyV20
>>> import oandapyV20.endpoints.orders as orders
>>> client = oandapyV20.API(access_token=...)
>>> r = orders.OrderCreate(accountID, data=data)
>>> client.request(r)
>>> print r.response
```


```
{
  "orderCreateTransaction": {
    "price": "1.20000",
    "stopLossOnFill": {
      "timeInForce": "GTC",
      "price": "1.22000"
    },
    "timeInForce": "GTC",
    "reason": "CLIENT_ORDER",
    "id": "2304",
    "batchID": "2304",
    "triggerCondition": "TRIGGER_DEFAULT",
    "positionFill": "DEFAULT",
    "userID": 1435156,
    "instrument": "EUR_USD",
    "time": "2016-10-24T21:48:18.593753865Z",
    "units": "-100",
    "type": "LIMIT_ORDER",
    "accountID": "101-004-1435156-001"
  },
  "lastTransactionID": "2304",
  "relatedTransactionIDs": [
    "2304"
  ]
}
```


3.4.4 OrderDetails

class oandapyV20.endpoints.orders.**OrderDetails**(*accountID*, *orderID*)

Bases: oandapyV20.endpoints.orders.Orders

Get details for a single Order in an Account.

ENDPOINT = 'v3/accounts/{accountID}/orders/{orderID}'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID*, *orderID*)

Instantiate an OrderDetails request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **orderID** (*string (required)*) – id of the order to perform the request on.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.orders as orders
>>> client = oandapyV20.API(access_token=...)
>>> r = orders.OrderDetails(accountID=..., orderID=...)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "order": {
    "partialFill": "DEFAULT_FILL",
    "price": "1.20000",
    "stopLossOnFill": {
      "timeInForce": "GTC",
      "price": "1.22000"
    },
    "timeInForce": "GTC",
    "createTime": "2016-10-25T21:07:21.065554321Z",
    "triggerCondition": "TRIGGER_DEFAULT",
    "positionFill": "POSITION_DEFAULT",
    "id": "2309",
    "instrument": "EUR_USD",
    "state": "PENDING",
    "units": "-100",
    "type": "LIMIT"
  },
  "lastTransactionID": "2309"
}
```


3.4.5 OrderList

class oandapyV20.endpoints.orders.**OrderList**(*accountID*, *params=None*)

Bases: oandapyV20.endpoints.orders.Orders

Create an Order for an Account.

ENDPOINT = 'v3/accounts/{accountID}/orders'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID*, *params=None*)

Instantiate an OrderList request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **params** (*dict*) – optional request query parameters, check developer.oanda.com for details

Example:

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.orders as orders
>>> client = oandapyV20.API(access_token=...)
>>> r = orders.OrderList(accountID)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "orders": [
    {
      "partialFill": "DEFAULT_FILL",
      "price": "1.20000",
      "stopLossOnFill": {
        "timeInForce": "GTC",
        "price": "1.22000"
      },
      "timeInForce": "GTC",
      "createTime": "2016-10-05T10:25:47.627003645Z",
      "triggerCondition": "TRIGGER_DEFAULT",
      "positionFill": "POSITION_DEFAULT",
      "id": "2125",
      "instrument": "EUR_USD",
      "state": "PENDING",
      "units": "-100",
      "type": "LIMIT"
    }
  ],
  "lastTransactionID": "2129"
}
```


3.4.6 OrderReplace

class `oandapyV20.endpoints.orders.`**OrderReplace**(*accountID*, *orderID*, *data*)

Bases: `oandapyV20.endpoints.orders.Orders`

OrderReplace.

Replace an Order in an Account by simultaneously cancelling it and creating a replacement Order.

ENDPOINT = 'v3/accounts/{accountID}/orders/{orderID}'

EXPECTED_STATUS = 201

HEADERS = {'Content-Type': 'application/json'}

METHOD = 'PUT'

__init__(*accountID*, *orderID*, *data*)

Instantiate an OrderReplace request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **orderID** (*string (required)*) – id of the order to perform the request on.
- **data** (*JSON (required)*) – json orderbody to send

Orderbody example:

```
{
  "order": {
    "units": "-500000",
    "instrument": "EUR_USD",
    "price": "1.25000",
    "type": "LIMIT"
  }
}
```


```
>>> import oandapyV20
>>> import oandapyV20.endpoints.orders as orders
>>> client = oandapyV20.API(access_token=...)
>>> data =
        {
          "order": {
            "units": "-500000",
            "instrument": "EUR_USD",
            "price": "1.25000",
            "type": "LIMIT"
          }
        }
```

```
>>> r = orders.OrderReplace(accountID=..., orderID=..., data=data)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "orderCreateTransaction": {
    "price": "1.25000",
    "timeInForce": "GTC",
    "reason": "REPLACEMENT",
    "clientExtensions": {
      "comment": "myComment",
      "id": "myID"
    },
    "id": "2307",
    "batchID": "2306",
    "triggerCondition": "TRIGGER_DEFAULT",
    "replacesOrderID": "2304",
    "positionFill": "DEFAULT",
    "userID": 1435156,
    "instrument": "EUR_USD",
    "time": "2016-10-25T19:45:38.558056359Z",
    "units": "-500000",
    "type": "LIMIT_ORDER",
    "accountID": "101-004-1435156-001"
  },
  "orderCancelTransaction": {
    "orderID": "2304",
    "clientOrderID": "myID",
    "reason": "CLIENT_REQUEST_REPLACED",
    "batchID": "2306",
    "time": "2016-10-25T19:45:38.558056359Z",
    "type": "ORDER_CANCEL",
    "replacedByOrderID": "2307",
```


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```
    "userID": 1435156,
    "id": "2306",
    "accountID": "101-004-1435156-001"
  },
  "lastTransactionID": "2307",
  "relatedTransactionIDs": [
    "2306",
    "2307"
  ]
}
```


3.4.7 OrdersPending

class oandapyV20.endpoints.orders.**OrdersPending**(*accountID*)

Bases: oandapyV20.endpoints.orders.Orders

List all pending Orders in an Account.

ENDPOINT = 'v3/accounts/{accountID}/pendingOrders'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID*)

Instantiate an OrdersPending request.

Parameters **accountID** (*string (required)*) – id of the account to perform the request on.

Example:

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.orders as orders
>>> client = oandapyV20.API(access_token=...)
>>> r = orders.OrdersPending(accountID)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "orders": [
    {
      "partialFill": "DEFAULT_FILL",
      "price": "1.20000",
      "stopLossOnFill": {
        "timeInForce": "GTC",
        "price": "1.22000"
      },
      "timeInForce": "GTC",
      "clientExtensions": {
        "comment": "myComment",
        "id": "myID"
      },
      "id": "2304",
      "triggerCondition": "TRIGGER_DEFAULT",
```


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```
      "positionFill": "POSITION_DEFAULT",
      "createTime": "2016-10-24T21:48:18.593753865Z",
      "instrument": "EUR_USD",
      "state": "PENDING",
      "units": "-100",
      "type": "LIMIT"
    }
  ],
  "lastTransactionID": "2305"
}
```

3.5 oandapyV20.endpoints.positions

3.5.1 OpenPositions

class oandapyV20.endpoints.positions.**OpenPositions**(*accountID*)

Bases: oandapyV20.endpoints.positions.Positions

OpenPositions.

List all open Positions for an Account. An open Position is a Position in an Account that currently has a Trade opened for it.

ENDPOINT = 'v3/accounts/{accountID}/openPositions'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID*)

Instantiate an OpenPositions request.

Parameters **accountID** (*string (required)*) – id of the account to perform the request on.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.positions as positions
>>> accountID = ...
>>> client = oandapyV20.API(access_token=...)
>>> r = positions.OpenPositions(accountID=accountID)
>>> client.request(r)
>>> print r.response
```

Output:

```
{
  "positions": [
    {
      "short": {
        "units": "0",
        "resettablePL": "-14164.3000",
        "unrealizedPL": "0.0000",
        "pl": "-14164.3000"
      },
      "unrealizedPL": "-284.0000",
      "long": {
```

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```
        "unrealizedPL": "-284.0000",
        "tradeIDs": [
          "2315"
        ],
        "resettablePL": "404.5000",
        "units": "10",
        "averagePrice": "10678.3",
        "pl": "404.5000"
      },
      "instrument": "DE30_EUR",
      "resettablePL": "-13759.8000",
      "pl": "-13759.8000"
    },
    {
      "short": {
        "unrealizedPL": "-0.0738",
        "tradeIDs": [
          "2323"
        ],
        "resettablePL": "0.0000",
        "units": "-100",
        "averagePrice": "1.09843",
        "pl": "0.0000"
      },
      "unrealizedPL": "-0.0738",
      "long": {
        "units": "0",
        "resettablePL": "-44.6272",
        "unrealizedPL": "0.0000",
        "pl": "-44.6272"
      },
      "instrument": "EUR_USD",
      "resettablePL": "-44.6272",
      "pl": "-44.6272"
    }
  ],
  "lastTransactionID": "2327"
}
```


3.5.2 PositionClose

class oandapyV20.endpoints.positions.**PositionClose**(*accountID*, *instrument*, *data*)

Bases: oandapyV20.endpoints.positions.Positions

Closeout the open Position regarding instrument in an Account.

ENDPOINT = 'v3/accounts/{accountID}/positions/{instrument}/close'

EXPECTED_STATUS = 200

HEADERS = {'Content-Type': 'application/json'}

METHOD = 'PUT'

__init__(*accountID*, *instrument*, *data*)

Instantiate a PositionClose request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **instrument** (*string (required)*) – instrument to close partially or fully.
- **data** (*dict (required)*) – closeout specification data to send, check developer.oanda.com for details.

Data body example:

```
{
  "longUnits": "ALL"
}
```

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.positions as positions
>>> accountID = ...
>>> instrument = ...
>>> client = oandapyV20.API(access_token=...)
>>> data =
        {
          "longUnits": "ALL"
        }
```

```
>>> r = positions.PositionClose(accountID=accountID,
>>>                             instrument=instrument,
>>>                             data=data)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "longOrderCreateTransaction": {
    "longPositionCloseout": {
      "units": "ALL",
      "instrument": "EUR_USD"
    },
    "batchID": "6390",
    "reason": "POSITION_CLOSEOUT",
    "id": "6390",
    "timeInForce": "FOK",
    "positionFill": "REDUCE_ONLY",
    "userID": "<USERID>",
    "instrument": "EUR_USD",
    "time": "2016-06-22T18:41:35.034041665Z",
    "units": "-251",
    "type": "MARKET_ORDER",
    "accountID": "<ACCOUNT>"
  },
  "relatedTransactionIDs": [
    "6390",
    "6391"
  ],
  "lastTransactionID": "6391",
  "longOrderFillTransaction": {
    "price": "1.13018",
    "batchID": "6390",
    "accountBalance": "43650.69807",
```


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```
    "reason": "MARKET_ORDER_POSITION_CLOSEOUT",
    "tradesClosed": [
      {
        "units": "-1",
        "financing": "0.00000",
        "realizedPL": "-0.00013",
        "tradeID": "6383"
      },
      {
        "units": "-250",
        "financing": "0.00000",
        "realizedPL": "-0.03357",
        "tradeID": "6385"
      }
    ],
    "id": "6391",
    "orderID": "6390",
    "financing": "0.00000",
    "userID": "<USERID>",
    "instrument": "EUR_USD",
    "time": "2016-06-22T18:41:35.034041665Z",
    "units": "-251",
    "type": "ORDER_FILL",
    "pl": "-0.03370",
    "accountID": "<ACCOUNT>"
  }
}
```


3.5.3 PositionDetails

class `oandapyV20.endpoints.positions.`**`PositionDetails`**(*accountID*, *instrument*)

Bases: `oandapyV20.endpoints.positions.Positions`

PositionDetails.

Get the details of a single instrument's position in an Account. The position may be open or not.

ENDPOINT = 'v3/accounts/{accountID}/positions/{instrument}'

EXPECTED_STATUS = 200

METHOD = 'GET'

`__init__`(*accountID*, *instrument*)

Instantiate a PositionDetails request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **instrument** (*string (required)*) – id of the instrument to get the position details for.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.positions as positions
>>> accountID = ...
>>> instrument = ...
>>> client = oandapyV20.API(access_token=...)
```

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```
>>> r = positions.PositionDetails(accountID=accountID, instrument)
>>> client.request(r)
>>> print r.response
```

Output:

```
{
  "position": {
    "short": {
      "unrealizedPL": "-0.0738",
      "tradeIDs": [
        "2323"
      ],
      "resettablePL": "0.0000",
      "units": "-100",
      "averagePrice": "1.09843",
      "pl": "0.0000"
    },
    "unrealizedPL": "-0.0738",
    "long": {
      "units": "0",
      "resettablePL": "-44.6272",
      "unrealizedPL": "0.0000",
      "pl": "-44.6272"
    },
    "instrument": "EUR_USD",
    "resettablePL": "-44.6272",
    "pl": "-44.6272"
  },
  "lastTransactionID": "2327"
}
```

3.5.4 PositionList

class oandapyV20.endpoints.positions.**PositionList**(*accountID*)

Bases: oandapyV20.endpoints.positions.Positions

PositionList.

List all Positions for an Account. The Positions returned are for every instrument that has had a position during the lifetime of the Account.

ENDPOINT = 'v3/accounts/{accountID}/positions'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID*)

Instantiate a PositionList request.

Parameters **accountID** (*string (required)*) – id of the account to perform the request on.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.positions as positions
>>> accountID = ...
```

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```
>>> client = oandapyV20.API(access_token=...)
>>> r = positions.PositionList(accountID=accountID)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "positions": [
    {
      "short": {
        "units": "0",
        "resettablePL": "-272.6805",
        "unrealizedPL": "0.0000",
        "pl": "-272.6805"
      },
      "unrealizedPL": "0.0000",
      "long": {
        "units": "0",
        "resettablePL": "0.0000",
        "unrealizedPL": "0.0000",
        "pl": "0.0000"
      },
      "instrument": "EUR_GBP",
      "resettablePL": "-272.6805",
      "pl": "-272.6805"
    },
    {
      "short": {
        "unrealizedPL": "870.0000",
        "tradeIDs": [
          "2121",
          "2123"
        ],
        "resettablePL": "-13959.3000",
        "units": "-20",
        "averagePrice": "10581.5",
        "pl": "-13959.3000"
      },
      "unrealizedPL": "870.0000",
      "long": {
        "units": "0",
        "resettablePL": "404.5000",
        "unrealizedPL": "0.0000",
        "pl": "404.5000"
      },
      "instrument": "DE30_EUR",
      "resettablePL": "-13554.8000",
      "pl": "-13554.8000"
    },
    {
      "short": {
        "units": "0",
        "resettablePL": "0.0000",
        "unrealizedPL": "0.0000",
        "pl": "0.0000"
      },
```


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```
      "unrealizedPL": "0.0000",
      "long": {
        "units": "0",
        "resettablePL": "-12.8720",
        "unrealizedPL": "0.0000",
        "pl": "-12.8720"
      },
      "instrument": "EUR_USD",
      "resettablePL": "-12.8720",
      "pl": "-12.8720"
    }
  ],
  "lastTransactionID": "2124"
}
```


3.6 oandapyV20.endpoints.pricing

3.6.1 PricingInfo

class oandapyV20.endpoints.pricing.**PricingInfo**(*accountID*, *params=None*)

Bases: oandapyV20.endpoints.pricing.Pricing

Pricing.

Get pricing information for a specified list of Instruments within an account.

ENDPOINT = 'v3/accounts/{accountID}/pricing'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID*, *params=None*)

Instantiate a PricingStream APIRequest instance.

Parameters

- **accountID** (*string (required)*) – the accountID of the account.
- **params** (*dict (required)*) – parameters for the request, check developer.oanda.com for details.

Example

```
>>> import oandapyV20
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.pricing as pricing
>>> accountID = "..."
>>> api = API(access_token="...")
>>> params =
        {
          "instruments": "EUR_USD,EUR_JPY"
        }
```

```
>>> r = pricing.PricingInfo(accountID=accountID, params=params)
>>> rv = api.request(r)
>>> print r.response
```

Output:


```
{
  "prices": [
    {
      "status": "tradeable",
      "instrument": "EUR_USD",
      "quoteHomeConversionFactors": {
        "negativeUnits": "0.89160730",
        "positiveUnits": "0.89150397"
      },
      "asks": [
        {
          "price": "1.12170",
          "liquidity": 10000000
        },
        {
          "price": "1.12172",
          "liquidity": 10000000
        }
      ],
      "time": "2016-10-05T05:28:16.729643492Z",
      "closeoutAsk": "1.12174",
      "bids": [
        {
          "price": "1.12157",
          "liquidity": 10000000
        },
        {
          "price": "1.12155",
          "liquidity": 10000000
        }
      ],
      "closeoutBid": "1.12153",
      "unitsAvailable": {
        "default": {
          "short": "506246",
          "long": "506128"
        },
        "reduceOnly": {
          "short": "0",
          "long": "0"
        },
        "openOnly": {
          "short": "506246",
          "long": "506128"
        },
        "reduceFirst": {
          "short": "506246",
          "long": "506128"
        }
      }
    },
```


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```
    {
      "status": "tradeable",
      "instrument": "EUR_JPY",
      "quoteHomeConversionFactors": {
        "negativeUnits": "0.00867085",
        "positiveUnits": "0.00866957"
      },
      "asks": [
        {
          "price": "115.346",
          "liquidity": 1000000
        },
        {
          "price": "115.347",
          "liquidity": 2000000
        },
        {
          "price": "115.348",
          "liquidity": 5000000
        },
        {
          "price": "115.350",
          "liquidity": 10000000
        }
      ],
      "time": "2016-10-05T05:28:15.621238671Z",
      "closeoutAsk": "115.350",
      "bids": [
        {
          "price": "115.329",
          "liquidity": 1000000
        },
        {
          "price": "115.328",
          "liquidity": 2000000
        },
        {
          "price": "115.327",
          "liquidity": 5000000
        },
        {
          "price": "115.325",
          "liquidity": 10000000
        }
      ],
      "closeoutBid": "115.325",
      "unitsAvailable": {
        "default": {
          "short": "506262",
          "long": "506112"
        },
        "reduceOnly": {
          "short": "0",
          "long": "0"
        },
        "openOnly": {
          "short": "506262",
```


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```
          "long": "506112"
        },
        "reduceFirst": {
          "short": "506262",
          "long": "506112"
        }
      }
    }
  ]
}
```


3.6.2 PricingStream

class oandapyV20.endpoints.pricing.**PricingStream**(*accountID*, *params=None*)
Bases: oandapyV20.endpoints.pricing.Pricing

PricingStream.

Get realtime pricing information for a specified list of Instruments.

ENDPOINT = 'v3/accounts/{accountID}/pricing/stream'

EXPECTED_STATUS = 200

METHOD = 'GET'

STREAM = True

__init__(*accountID*, *params=None*)
Instantiate a PricingStream APIRequest instance.

Parameters

- **accountID** (*string (required)*) – the accountID of the account.
- **params** (*dict (required)*) – parameters for the request, check developer.oanda.com for details.

Example

```
>>> import oandapyV20
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.pricing as pricing
>>> accountID = "..."
>>> api = API(access_token="...")
>>> params =
        {
          "instruments": "EUR_USD,EUR_JPY"
        }
```

```
>>> r = pricing.PricingStream(accountID=accountID, params=params)
>>> rv = api.request(r)
>>> maxrecs = 100
>>> for ticks in r:
>>>     print json.dumps(R, indent=4),","
>>>     if maxrecs == 0:
>>>         r.terminate("maxrecs records received")
```

Output:


```
{
  "status": "tradeable",
  "instrument": "EUR_JPY",
  "asks": [
    {
      "price": "114.312",
      "liquidity": 1000000
    },
    {
      "price": "114.313",
      "liquidity": 2000000
    },
    {
      "price": "114.314",
      "liquidity": 5000000
    },
    {
      "price": "114.316",
      "liquidity": 10000000
    }
  ],
  "time": "2016-10-27T08:38:43.094548890Z",
  "closeoutAsk": "114.316",
  "type": "PRICE",
  "closeoutBid": "114.291",
  "bids": [
    {
      "price": "114.295",
      "liquidity": 1000000
    },
    {
      "price": "114.294",
      "liquidity": 2000000
    },
    {
      "price": "114.293",
      "liquidity": 5000000
    },
    {
      "price": "114.291",
      "liquidity": 10000000
    }
  ]
},
{
  "type": "HEARTBEAT",
  "time": "2016-10-27T08:38:44.327443673Z"
},
{
  "status": "tradeable",
  "instrument": "EUR_USD",
  "asks": [
    {
      "price": "1.09188",
      "liquidity": 10000000
    },
```


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```
    {
      "price": "1.09190",
      "liquidity": 10000000
    }
  ],
  "time": "2016-10-27T08:38:45.664613867Z",
  "closeoutAsk": "1.09192",
  "type": "PRICE",
  "closeoutBid": "1.09173",
  "bids": [
    {
      "price": "1.09177",
      "liquidity": 10000000
    },
    {
      "price": "1.09175",
      "liquidity": 10000000
    }
  ]
},
{
  "status": "tradeable",
  "instrument": "EUR_JPY",
  "asks": [
    {
      "price": "114.315",
      "liquidity": 1000000
    },
    {
      "price": "114.316",
      "liquidity": 2000000
    },
    {
      "price": "114.317",
      "liquidity": 5000000
    },
    {
      "price": "114.319",
      "liquidity": 10000000
    }
  ],
  "time": "2016-10-27T08:38:45.681572782Z",
  "closeoutAsk": "114.319",
  "type": "PRICE",
  "closeoutBid": "114.294",
  "bids": [
    {
      "price": "114.298",
      "liquidity": 1000000
    },
    {
      "price": "114.297",
      "liquidity": 2000000
    },
    {
      "price": "114.296",
      "liquidity": 5000000
```


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```
    },
    {
      "price": "114.294",
      "liquidity": 10000000
    }
  ]
}
```

terminate (*message=''*)
terminate the stream.

Calling this method will stop the generator yielding tickrecords. A message can be passed optionally.

3.7 oandapyV20.endpoints.trades

3.7.1 OpenTrades

class oandapyV20.endpoints.trades.**OpenTrades** (*accountID*)
Bases: oandapyV20.endpoints.trades.Trades

Get the list of open Trades for an Account.

ENDPOINT = 'v3/accounts/{accountID}/openTrades'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__ (*accountID*)
Instantiate an OpenTrades request.

Parameters accountID (*string (required)*) – id of the account to perform the request on.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.trades as trades
>>> client = oandapyV20.API(access_token=...)
>>> r = trades.OpenTrades(accountID=...)
>>> client.request(r)
>>> print r.response
```

Output:

```
{
  "trades": [
    {
      "instrument": "DE30_EUR",
      "financing": "0.0000",
      "openTime": "2016-10-28T14:28:05.231759081Z",
      "initialUnits": "10",
      "currentUnits": "10",
      "price": "10678.3",
      "unrealizedPL": "136.0000",
      "realizedPL": "0.0000",
      "state": "OPEN",
      "id": "2315"
```

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```
    }
  ],
  "lastTransactionID": "2317"
}
```

3.7.2 TradeCRCDO

class oandapyV20.endpoints.trades.**TradeCRCDO**(*accountID*, *tradeID*, *data*)

Bases: oandapyV20.endpoints.trades.Trades

Trade Create Replace Cancel Dependent Orders.

ENDPOINT = 'v3/accounts/{accountID}/trades/{tradeID}/orders'

EXPECTED_STATUS = 200

HEADERS = {'Content-Type': 'application/json'}

METHOD = 'PUT'

__init__(*accountID*, *tradeID*, *data*)

Instantiate a TradeClientExtensions request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **tradeID** (*string (required)*) – id of the trade to update client extensions for.
- **data** (*dict (required)*) – clientextension data to send, check developer.oanda.com for details.

Data body example:

```
{
  "takeProfit": {
    "timeInForce": "GTC",
    "price": "1.05"
  },
  "stopLoss": {
    "timeInForce": "GTC",
    "price": "1.10"
  }
}
```

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.trades as trades
>>> accountID = ...
>>> tradeID = ...
>>> client = oandapyV20.API(access_token=...)
>>> data =
        {
          "takeProfit": {
            "timeInForce": "GTC",
            "price": "1.05"
          },
          "stopLoss": {
            "timeInForce": "GTC",
```

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```
            "price": "1.10"
          }
        }
```

```
>>> r = trades.TradeCRCDO(accountID=accountID,
>>>                       tradeID=tradeID,
>>>                       data=data)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "lastTransactionID": "2327",
  "stopLossOrderCancelTransaction": {
    "orderID": "2324",
    "batchID": "2325",
    "reason": "CLIENT_REQUEST_REPLACED",
    "time": "2016-10-28T21:00:19.978476830Z",
    "type": "ORDER_CANCEL",
    "replacedByOrderID": "2327",
    "userID": 1435156,
    "id": "2326",
    "accountID": "101-004-1435156-001"
  },
  "stopLossOrderTransaction": {
    "tradeID": "2323",
    "price": "1.10000",
    "timeInForce": "GTC",
    "reason": "REPLACEMENT",
    "id": "2327",
    "batchID": "2325",
    "triggerCondition": "TRIGGER_DEFAULT",
    "replacesOrderID": "2324",
    "userID": 1435156,
    "time": "2016-10-28T21:00:19.978476830Z",
    "cancellingTransactionID": "2326",
    "type": "STOP_LOSS_ORDER",
    "accountID": "101-004-1435156-001"
  },
  "relatedTransactionIDs": [
    "2325",
    "2326",
    "2327"
  ],
  "takeProfitOrderTransaction": {
    "tradeID": "2323",
    "price": "1.05000",
    "timeInForce": "GTC",
    "reason": "CLIENT_ORDER",
    "id": "2325",
    "batchID": "2325",
    "triggerCondition": "TRIGGER_DEFAULT",
    "userID": 1435156,
    "time": "2016-10-28T21:00:19.978476830Z",
    "type": "TAKE_PROFIT_ORDER",
```


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```
    "accountID": "101-004-1435156-001"
  }
}
```

3.7.3 TradeClientExtensions

class `oandapyV20.endpoints.trades.`**`TradeClientExtensions`**(*accountID*, *tradeID*, *data=None*)

Bases: `oandapyV20.endpoints.trades.Trades`

TradeClientExtensions.

Update the Client Extensions for a Trade. Do not add, update or delete the Client Extensions if your account is associated with MT4.

`ENDPOINT = 'v3/accounts/{accountID}/trades/{tradeID}/clientExtensions'`

`EXPECTED_STATUS = 200`

`HEADERS = {'Content-Type': 'application/json'}`

`METHOD = 'PUT'`

`__init__`(*accountID*, *tradeID*, *data=None*)

Instantiate a TradeClientExtensions request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **tradeID** (*string (required)*) – id of the trade to update client extensions for.
- **data** (*dict (required)*) – clientextension data to send, check developer.oanda.com for details.

Data body example:

```
{
  "clientExtensions": {
    "comment": "myComment",
    "id": "myID2315"
  }
}
```

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.trades as trades
>>> accountID = ...
>>> tradeID = ...
>>> client = oandapyV20.API(access_token=...)
>>> data =
        {
          "clientExtensions": {
            "comment": "myComment",
            "id": "myID2315"
          }
        }
```

```
>>> r = trades.TradeClientExtensions(accountID=accountID,
>>>                                  tradeID=tradeID,
>>>                                  data=data)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "tradeClientExtensionsModifyTransaction": {
    "batchID": "2319",
    "tradeID": "2315",
    "time": "2016-10-28T20:32:39.356516787Z",
    "tradeClientExtensionsModify": {
      "comment": "myComment",
      "id": "myID2315"
    },
    "type": "TRADE_CLIENT_EXTENSIONS_MODIFY",
    "userID": 1435156,
    "id": "2319",
    "accountID": "101-004-1435156-001"
  },
  "lastTransactionID": "2319",
  "relatedTransactionIDs": [
    "2319"
  ]
}
```


3.7.4 TradeClose

class oandapyV20.endpoints.trades.**TradeClose**(*accountID*, *tradeID*, *data=None*)

Bases: oandapyV20.endpoints.trades.Trades

TradeClose.

Close (partially or fully) a specific open Trade in an Account.

ENDPOINT = 'v3/accounts/{accountID}/trades/{tradeID}/close'

EXPECTED_STATUS = 200

HEADERS = {'Content-Type': 'application/json'}

METHOD = 'PUT'

__init__(*accountID*, *tradeID*, *data=None*)

Instantiate a TradeClose request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **tradeID** (*string (required)*) – id of the trade to close.
- **data** (*dict (optional)*) – data to send, use this to close a trade partially. Check developer.oanda.com for details.

Data body example:

```
{
  "units": 100
}
```

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.trades as trades
>>> client = oandapyV20.API(access_token=...)
>>> data =
        {
          "units": 100
        }
```

```
>>> r = trades.TradeClose(accountID=..., data=data)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "orderFillTransaction": {
    "price": "1.09289",
    "batchID": "2316",
    "accountBalance": "33848.1208",
    "reason": "MARKET_ORDER_TRADE_CLOSE",
    "tradesClosed": [
      {
        "units": "-100",
        "financing": "0.0000",
        "realizedPL": "-0.1455",
        "tradeID": "2313"
      }
    ],
    "id": "2317",
    "orderID": "2316",
    "financing": "0.0000",
    "userID": 1435156,
    "instrument": "EUR_USD",
    "time": "2016-10-28T15:11:58.023004583Z",
    "units": "-100",
    "type": "ORDER_FILL",
    "pl": "-0.1455",
    "accountID": "101-004-1435156-001"
  },
  "orderCreateTransaction": {
    "timeInForce": "FOK",
    "reason": "TRADE_CLOSE",
    "tradeClose": {
      "units": "100",
      "tradeID": "2313"
    },
    "id": "2316",
    "batchID": "2316",
    "positionFill": "REDUCE_ONLY",
    "userID": 1435156,
    "instrument": "EUR_USD",
    "time": "2016-10-28T15:11:58.023004583Z",
    "units": "-100",
```


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```
    "type": "MARKET_ORDER",
    "accountID": "101-004-1435156-001"
  },
  "lastTransactionID": "2317",
  "relatedTransactionIDs": [
    "2316",
    "2317"
  ]
}
```


3.7.5 TradeDetails

class oandapyV20.endpoints.trades.**TradeDetails**(*accountID*, *tradeID*)

Bases: oandapyV20.endpoints.trades.Trades

Get the details of a specific Trade in an Account.

ENDPOINT = 'v3/accounts/{accountID}/trades/{tradeID}'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID*, *tradeID*)

Instantiate a TradeDetails request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **tradeID** (*string (required)*) – id of the trade.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.trades as trades
>>> client = oandapyV20.API(access_token=...)
>>> r = accounts.TradeDetails(accountID=..., tradeID=...)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "lastTransactionID": "2317",
  "trade": {
    "instrument": "DE30_EUR",
    "financing": "0.0000",
    "openTime": "2016-10-28T14:28:05.231759081Z",
    "initialUnits": "10",
    "currentUnits": "10",
    "price": "10678.3",
    "unrealizedPL": "226.0000",
    "realizedPL": "0.0000",
    "state": "OPEN",
    "id": "2315"
  }
}
```

3.7.6 TradesList

class oandapyV20.endpoints.trades.**TradesList**(*accountID, params=None*)
Bases: oandapyV20.endpoints.trades.Trades

Get a list of trades for an Account.

ENDPOINT = 'v3/accounts/{accountID}/trades'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID, params=None*)
Instantiate a TradesList request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **params** (*dict (optional)*) – query params to send, check developer.oanda.com for details.

Query Params example:

```
{
  "instrument": "DE30_EUR,EUR_USD"
}
```

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.trades as trades
>>> client = oandapyV20.API(access_token=...)
>>> params =
        {
          "instrument": "DE30_EUR,EUR_USD"
        }
```

```
>>> r = trades.TradesList(accountID=..., params=params)
>>> client.request(r)
>>> print r.response
```

Output:

```
{
  "trades": [
    {
      "instrument": "DE30_EUR",
      "financing": "0.0000",
      "openTime": "2016-10-28T14:28:05.231759081Z",
      "initialUnits": "10",
      "currentUnits": "10",
      "price": "10678.3",
      "unrealizedPL": "25.0000",
      "realizedPL": "0.0000",
      "state": "OPEN",
      "id": "2315"
    },
    {
      "instrument": "EUR_USD",
      "financing": "0.0000",
```

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```
      "openTime": "2016-10-28T14:27:19.011002322Z",
      "initialUnits": "100",
      "currentUnits": "100",
      "price": "1.09448",
      "unrealizedPL": "-0.0933",
      "realizedPL": "0.0000",
      "state": "OPEN",
      "id": "2313"
    }
  ],
  "lastTransactionID": "2315"
}
```


3.8 oandapyV20.endpoints.transactions

3.8.1 TransactionDetails

class oandapyV20.endpoints.transactions.**TransactionDetails**(*accountID*, *transactionID*)

Bases: `oandapyV20.endpoints.transactions.Transactions`

Get the details of a single Account Transaction.

ENDPOINT = 'v3/accounts/{accountID}/transactions/{transactionID}'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID*, *transactionID*)

Instantiate a TransactionDetails request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **transactionID** (*string (required)*) – id of the transaction

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.transactions as trans
>>> client = oandapyV20.API(access_token=...)
>>> r = trans.TransactionDetails(accountID=..., transactionID=...)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "transaction": {
    "price": "1.20000",
    "stopLossOnFill": {
      "timeInForce": "GTC",
      "price": "1.22000"
    },
    "timeInForce": "GTC",
    "reason": "CLIENT_ORDER",
```


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```
    "id": "2304",
    "batchID": "2304",
    "triggerCondition": "TRIGGER_DEFAULT",
    "positionFill": "DEFAULT",
    "userID": 1435156,
    "instrument": "EUR_USD",
    "time": "2016-10-24T21:48:18.593753865Z",
    "units": "-100",
    "type": "LIMIT_ORDER",
    "accountID": "101-004-1435156-001"
  },
  "lastTransactionID": "2311"
}
```


3.8.2 TransactionIDRange

class oandapyV20.endpoints.transactions.**TransactionIDRange**(*accountID*, *params=None*)

Bases: `oandapyV20.endpoints.transactions.Transactions`

TransactionIDRange.

Get a range of Transactions for an Account based on Transaction IDs.

ENDPOINT = 'v3/accounts/{accountID}/transactions/idrange'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID*, *params=None*)

Instantiate an TransactionIDRange request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **params** (*dict (required)*) – query params to send, check developer.oanda.com for details.

Query Params example:


```
{
  "to": 2306,
  "from": 2304
}
```


```
>>> import oandapyV20
>>> import oandapyV20.endpoints.transactions as trans
>>> client = oandapyV20.API(access_token=...)
>>> params =
        {
          "to": 2306,
          "from": 2304
        }
```

```
>>> r = trans.TransactionIDRange(accountID=..., params=params)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "lastTransactionID": "2311",
  "transactions": [
    {
      "price": "1.20000",
      "stopLossOnFill": {
        "timeInForce": "GTC",
        "price": "1.22000"
      },
      "timeInForce": "GTC",
      "reason": "CLIENT_ORDER",
      "id": "2304",
      "batchID": "2304",
      "triggerCondition": "TRIGGER_DEFAULT",
      "positionFill": "DEFAULT",
      "userID": 1435156,
      "instrument": "EUR_USD",
      "time": "2016-10-24T21:48:18.593753865Z",
      "units": "-100",
      "type": "LIMIT_ORDER",
      "accountID": "101-004-1435156-001"
    },
    {
      "orderID": "2304",
      "batchID": "2305",
      "clientExtensionsModify": {
        "comment": "myComment",
        "id": "myID"
      },
      "time": "2016-10-25T15:56:43.075594239Z",
      "type": "ORDER_CLIENT_EXTENSIONS_MODIFY",
      "userID": 1435156,
      "id": "2305",
      "accountID": "101-004-1435156-001"
    },
    {
      "orderID": "2304",
      "clientOrderID": "myID",
      "reason": "CLIENT_REQUEST_REPLACED",
      "batchID": "2306",
      "time": "2016-10-25T19:45:38.558056359Z",
      "type": "ORDER_CANCEL",
      "replacedByOrderID": "2307",
      "userID": 1435156,
      "id": "2306",
      "accountID": "101-004-1435156-001"
    }
  ]
}
```

3.8.3 TransactionList

class oandapyV20.endpoints.transactions.**TransactionList**(*accountID*, *params=None*)

Bases: oandapyV20.endpoints.transactions.Transactions

TransactionList.

Get a list of Transactions pages that satisfy a time-based Transaction query.

ENDPOINT = 'v3/accounts/{accountID}/transactions'

EXPECTED_STATUS = 200

METHOD = 'GET'

__init__(*accountID*, *params=None*)

Instantiate a TransactionList request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **params** (*dict (optional)*) – query params to send, check developer.oanda.com for details.

Query Params example:

```
{
  "pageSize": 200
}
```

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.transactions as trans
>>> client = oandapyV20.API(access_token=...)
>>> r = trans.TransactionList(accountID)  # params optional
>>> client.request(r)
>>> print r.response
```

Output:

```
{
  "count": 2124,
  "from": "2016-06-24T21:03:50.914647476Z",
  "lastTransactionID": "2124",
  "pageSize": 100,
  "to": "2016-10-05T06:54:14.025946546Z",
  "pages": [
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=1&to=100",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=101&to=200",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=201&to=300",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=301&to=400",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=401&to=500",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=501&to=600",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=601&to=700",
```

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```
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=701&to=800",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=801&to=900",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=901&to=1000",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=1001&to=1100",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=1101&to=1200",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=1201&to=1300",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=1301&to=1400",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=1401&to=1500",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=1501&to=1600",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=1601&to=1700",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=1701&to=1800",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=1801&to=1900",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=1901&to=2000",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=2001&to=2100",
    "https://api-fxpractice.oanda.com/v3/accounts/101-004-1435156-001/
↪transactions/idrange?from=2101&to=2124"
  ]
}
```


3.8.4 TransactionsSinceID

class `oandapyV20.endpoints.transactions.`**`TransactionsSinceID`**(*accountID*, *params=None*)

Bases: `oandapyV20.endpoints.transactions.Transactions`

TransactionsSinceID.

Get a range of Transactions for an Account starting at (but not including) a provided Transaction ID.

`ENDPOINT = 'v3/accounts/{accountID}/transactions/sinceid'`

`EXPECTED_STATUS = 200`

`METHOD = 'GET'`

`__init__`(*accountID*, *params=None*)

Instantiate an TransactionsSince request.

Parameters

- **accountID** (*string (required)*) – id of the account to perform the request on.
- **params** (*dict (required)*) – query params to send, check developer.oanda.com for details.

Query Params example:

```
{
  "id": 2306
}
```

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.transactions as trans
>>> client = oandapyV20.API(access_token=...)
>>> params =
        {
          "id": 2306
        }
```

```
>>> r = trans.TransactionsSinceID(accountID=..., params=params)
>>> client.request(r)
>>> print r.response
```

Output:


```
{
  "lastTransactionID": "2311",
  "transactions": [
    {
      "price": "1.25000",
      "timeInForce": "GTC",
      "reason": "REPLACEMENT",
      "clientExtensions": {
        "comment": "myComment",
        "id": "myID"
      },
      "id": "2307",
      "batchID": "2306",
      "triggerCondition": "TRIGGER_DEFAULT",
      "replacesOrderID": "2304",
      "positionFill": "DEFAULT",
      "userID": 1435156,
      "instrument": "EUR_USD",
      "time": "2016-10-25T19:45:38.558056359Z",
      "units": "-500000",
      "type": "LIMIT_ORDER",
      "accountID": "101-004-1435156-001"
    },
    {
      "orderID": "2307",
      "clientOrderID": "myID",
      "reason": "CLIENT_REQUEST",
      "batchID": "2308",
      "time": "2016-10-25T20:53:03.789670387Z",
      "type": "ORDER_CANCEL",
      "userID": 1435156,
      "id": "2308",
      "accountID": "101-004-1435156-001"
    },
    {
      "price": "1.20000",
      "stopLossOnFill": {
```


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```
        "timeInForce": "GTC",
        "price": "1.22000"
      },
      "timeInForce": "GTC",
      "reason": "CLIENT_ORDER",
      "id": "2309",
      "batchID": "2309",
      "triggerCondition": "TRIGGER_DEFAULT",
      "positionFill": "DEFAULT",
      "userID": 1435156,
      "instrument": "EUR_USD",
      "time": "2016-10-25T21:07:21.065554321Z",
      "units": "-100",
      "type": "LIMIT_ORDER",
      "accountID": "101-004-1435156-001"
    },
    {
      "userID": 1435156,
      "marginRate": "0.01",
      "batchID": "2310",
      "time": "2016-10-26T13:28:00.507651360Z",
      "type": "CLIENT_CONFIGURE",
      "id": "2310",
      "accountID": "101-004-1435156-001"
    },
    {
      "userID": 1435156,
      "marginRate": "0.01",
      "batchID": "2311",
      "time": "2016-10-26T13:28:13.597103123Z",
      "type": "CLIENT_CONFIGURE",
      "id": "2311",
      "accountID": "101-004-1435156-001"
    }
  ]
}
```


3.8.5 TransactionsStream

class `oandapyV20.endpoints.transactions.`**`TransactionsStream`**(*accountID*, *params=None*)

Bases: `oandapyV20.endpoints.transactions.Transactions`

TransactionsStream.

Get a stream of Transactions for an Account starting from when the request is made.

ENDPOINT = 'v3/accounts/{accountID}/transactions/stream'

EXPECTED_STATUS = 200

METHOD = 'GET'

STREAM = True

__init__(*accountID*, *params=None*)

Instantiate an TransactionsStream request.

Performing this request will result in a generator yielding transactions.

Parameters **accountID** (*string (required)*) – id of the account to perform the request on.

```
>>> import oandapyV20
>>> import oandapyV20.endpoints.transactions as trans
>>> client = oandapyV20.API(access_token=...)
>>> r = trans.TransactionsStream(accountID=...)
>>> rv = client.request(r)
>>> maxrecs = 5
>>> try:
>>>     for T in r.response:  # or rv ...
>>>         print json.dumps(R, indent=4), ","
>>>         maxrecs -= 1
>>>         if maxrecs == 0:
>>>             r.terminate("Got them all")
>>> except StreamTerminated as e:
>>>    print("Finished: {msg}".format(msg=e))
```

Output:

```
      {
        "type": "HEARTBEAT",
        "lastTransactionID": "2311",
        "time": "2016-10-28T11:56:12.002855862Z"
      },
      {
        "type": "HEARTBEAT",
        "lastTransactionID": "2311",
        "time": "2016-10-28T11:56:17.059535527Z"
      },
      {
        "type": "HEARTBEAT",
        "lastTransactionID": "2311",
        "time": "2016-10-28T11:56:22.142256403Z"
      },
      {
        "type": "HEARTBEAT",
        "lastTransactionID": "2311",
        "time": "2016-10-28T11:56:27.238853774Z"
      },
      {
        "type": "HEARTBEAT",
        "lastTransactionID": "2311",
        "time": "2016-10-28T11:56:32.289316796Z"
      }


Finished: Got them all
```

terminate (*message=''*)

terminate the stream.

Calling this method will stop the generator yielding transaction records. A message can be passed optionally.

CHAPTER 4

oandapyV20.definitions

The `oandapyV20.definitions` module holds all the definitions as in the definitions section of the REST-V20 specs of OANDA, see developer.oanda.com.

4.1 oandapyV20.definitions.accounts

Account Definitions.

class oandapyV20.definitions.accounts.**AccountFinancingMode**

Bases: `object`

Definition representation of AccountFinancingMode

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.accounts as defaccounts
>>> print defaccounts.AccountFinancingMode.SECOND_BY_SECOND
SECOND_BY_SECOND
>>> c = defaccounts.AccountFinancingMode()
>>> print c[c.SECOND_BY_SECOND]
Second-by-second financing is paid/charged for open Trades in the Account, both␣
↪daily and when the the Trade is closed
>>> # or
>>> print defaccounts.AccountFinancingMode().definitions[c.SECOND_BY_SECOND]
>>> # all keys
>>> print defaccounts.AccountFinancingMode().definitions.keys()
>>> ...
```

DAILY = 'DAILY'

NO_FINANCING = 'NO_FINANCING'

SECOND_BY_SECOND = 'SECOND_BY_SECOND'

__getitem__(*definitionID*)

return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.accounts.**GuaranteedStopLossOrderMode**
Bases: object

Definition representation of GuaranteedStopLossOrderMode

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.accounts as defaccounts
>>> print defaccounts.GuaranteedStopLossOrderMode.DISABLED
DISABLED
>>> c = defaccounts.GuaranteedStopLossOrderMode()
>>> print c[c.DISABLED]
The account is not permitted to create guaranteed Stop Loss Orders.
>>> # or
>>> print defaccounts.GuaranteedStopLossOrderMode().definitions[c.DISABLED]
>>> # all keys
>>> print defaccounts.GuaranteedStopLossOrderMode().definitions.keys()
>>> ...
```

ALLOWED = 'ALLOWED'

DISABLED = 'DISABLED'

REQUIRED = 'REQUIRED'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.accounts.**PositionAggregationMode**
Bases: object

Definition representation of PositionAggregationMode

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.accounts as defaccounts
>>> print defaccounts.PositionAggregationMode.NET_SUM
NET_SUM
>>> c = defaccounts.PositionAggregationMode()
>>> print c[c.NET_SUM]
The units for each side (long and short) of the Position are netted together and␣
↪the resulting value (long or short) is used to compute the Position value or␣
↪margin.
>>> # or
>>> print defaccounts.PositionAggregationMode().definitions[c.NET_SUM]
>>> # all keys
>>> print defaccounts.PositionAggregationMode().definitions.keys()
>>> ...
```

ABSOLUTE_SUM = 'ABSOLUTE_SUM'

MAXIMAL_SIDE = 'MAXIMAL_SIDE'

NET_SUM = 'NET_SUM'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

4.2 oandapyV20.definitions.instruments

Instruments Definitions.

class oandapyV20.definitions.instruments.**CandlestickGranularity**
Bases: object

Definition representation of CandlestickGranularity

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.instruments as definstruments
>>> print definstruments.CandlestickGranularity.H4
H4
>>> c = definstruments.CandlestickGranularity()
>>> print c[c.H4]
4 hour candlesticks, day alignment
>>> # or
>>> print definstruments.CandlestickGranularity().definitions[c.H4]
>>> # all keys
>>> print definstruments.CandlestickGranularity().definitions.keys()
>>> ...
```

D = 'D'

H1 = 'H1'

H12 = 'H12'

H2 = 'H2'

H3 = 'H3'

H4 = 'H4'

H6 = 'H6'

H8 = 'H8'

M = 'M'

M1 = 'M1'

M10 = 'M10'

M15 = 'M15'

M2 = 'M2'

M30 = 'M30'

M4 = 'M4'

M5 = 'M5'

S10 = 'S10'

S15 = 'S15'

S30 = 'S30'

S5 = 'S5'

W = 'W'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.instruments.**WeeklyAlignment**
Bases: object

Definition representation of WeeklyAlignment

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.instruments as definstruments
>>> print definstruments.WeeklyAlignment.Monday
Monday
>>> c = definstruments.WeeklyAlignment()
>>> print c[c.Monday]
Monday
>>> # or
>>> print definstruments.WeeklyAlignment().definitions[c.Monday]
>>> # all keys
>>> print definstruments.WeeklyAlignment().definitions.keys()
>>> ...
```

Friday = 'Friday'

Monday = 'Monday'

Saturday = 'Saturday'

Sunday = 'Sunday'

Thursday = 'Thursday'

Tuesday = 'Tuesday'

Wednesday = 'Wednesday'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.instruments.**PriceComponents**
Bases: object

Definition representation of PriceComponents

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.instruments as definstruments
>>> print definstruments.PriceComponents.A
A
>>> c = definstruments.PriceComponents()
>>> print c[c.A]
Ask
>>> # or
>>> print definstruments.PriceComponents().definitions[c.A]
```

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```
>>> # all keys
>>> print definstruments.PriceComponents().definitions.keys()
>>> ...
```

A = 'A'

B = 'B'

M = 'M'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

4.3 oandapyV20.definitions.orders

Order related definitions.

class oandapyV20.definitions.orders.**OrderStateFilter**
Bases: object

Definition representation of OrderStateFilter

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.orders as deforders
>>> print deforders.OrderStateFilter.CANCELLED
CANCELLED
>>> c = deforders.OrderStateFilter()
>>> print c[c.CANCELLED]
The orders that have been cancelled
>>> # or
>>> print deforders.OrderStateFilter().definitions[c.CANCELLED]
>>> # all keys
>>> print deforders.OrderStateFilter().definitions.keys()
>>> ...
```

ALL = 'ALL'

CANCELLED = 'CANCELLED'

FILLED = 'FILLED'

PENDING = 'PENDING'

TRIGGERED = 'TRIGGERED'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.orders.**OrderType**
Bases: object

Definition representation of OrderType

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.orders as deforders
>>> print deforders.OrderType.MARKET_IF_TOUCHED
MARKET_IF_TOUCHED
>>> c = deforders.OrderType()
>>> print c[c.MARKET_IF_TOUCHED]
A Market-if-touched Order
>>> # or
>>> print deforders.OrderType().definitions[c.MARKET_IF_TOUCHED]
>>> # all keys
>>> print deforders.OrderType().definitions.keys()
>>> ...
```

FIXED_PRICE = 'FIXED_PRICE'

LIMIT = 'LIMIT'

MARKET = 'MARKET'

MARKET_IF_TOUCHED = 'MARKET_IF_TOUCHED'

STOP = 'STOP'

STOP_LOSS = 'STOP_LOSS'

TAKE_PROFIT = 'TAKE_PROFIT'

TRAILING_STOP_LOSS = 'TRAILING_STOP_LOSS'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.orders.**CancellableOrderType**
Bases: object

Definition representation of CancellableOrderType

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.orders as deforders
>>> print deforders.CancellableOrderType.MARKET_IF_TOUCHED
MARKET_IF_TOUCHED
>>> c = deforders.CancellableOrderType()
>>> print c[c.MARKET_IF_TOUCHED]
A Market-if-touched Order
>>> # or
>>> print deforders.CancellableOrderType().definitions[c.MARKET_IF_TOUCHED]
>>> # all keys
>>> print deforders.CancellableOrderType().definitions.keys()
>>> ...
```

LIMIT = 'LIMIT'

MARKET_IF_TOUCHED = 'MARKET_IF_TOUCHED'

STOP = 'STOP'

STOP_LOSS = 'STOP_LOSS'

TAKE_PROFIT = 'TAKE_PROFIT'

TRAILING_STOP_LOSS = 'TRAILING_STOP_LOSS'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.orders.**OrderPositionFill**
Bases: object

Definition representation of OrderPositionFill

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.orders as deforders
>>> print deforders.OrderPositionFill.REDUCE_ONLY
REDUCE_ONLY
>>> c = deforders.OrderPositionFill()
>>> print c[c.REDUCE_ONLY]
When the Order is filled, only reduce an existing Position.
>>> # or
>>> print deforders.OrderPositionFill().definitions[c.REDUCE_ONLY]
>>> # all keys
>>> print deforders.OrderPositionFill().definitions.keys()
>>> ...
```

DEFAULT = 'DEFAULT'

OPEN_ONLY = 'OPEN_ONLY'

REDUCE_FIRST = 'REDUCE_FIRST'

REDUCE_ONLY = 'REDUCE_ONLY'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.orders.**TimeInForce**
Bases: object

Definition representation of TimeInForce

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.orders as deforders
>>> print deforders.TimeInForce.IOC
IOC
>>> c = deforders.TimeInForce()
>>> print c[c.IOC]
The Order must be "Immediately partially filled Or Killed"
>>> # or
>>> print deforders.TimeInForce().definitions[c.IOC]
>>> # all keys
>>> print deforders.TimeInForce().definitions.keys()
>>> ...
```

FOK = 'FOK'

GFD = 'GFD'

GTC = 'GTC'

GTD = 'GTD'

IOC = 'IOC'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.orders.**OrderState**
Bases: object

Definition representation of OrderState

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.orders as deforders
>>> print deforders.OrderState.CANCELLED
CANCELLED
>>> c = deforders.OrderState()
>>> print c[c.CANCELLED]
The Order has been cancelled
>>> # or
>>> print deforders.OrderState().definitions[c.CANCELLED]
>>> # all keys
>>> print deforders.OrderState().definitions.keys()
>>> ...
```

CANCELLED = 'CANCELLED'

FILLED = 'FILLED'

PENDING = 'PENDING'

TRIGGERED = 'TRIGGERED'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.orders.**OrderTriggerCondition**
Bases: object

Definition representation of OrderTriggerCondition

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.orders as deforders
>>> print deforders.OrderTriggerCondition.DEFAULT
DEFAULT
>>> c = deforders.OrderTriggerCondition()
>>> print c[c.DEFAULT]
Trigger an Order the “natural” way: compare its price to the ask for long Orders␣
↪and bid for short Orders
>>> # or
>>> print deforders.OrderTriggerCondition().definitions[c.DEFAULT]
>>> # all keys
```

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```
>>> print deforders.OrderTriggerCondition().definitions.keys()
>>> ...
```

ASK = 'ASK'

BID = 'BID'

DEFAULT = 'DEFAULT'

INVERSE = 'INVERSE'

MID = 'MID'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

4.4 oandapyV20.definitions.pricing

Pricing related Definitions.

class oandapyV20.definitions.pricing.**PriceStatus**
Bases: object

Definition representation of PriceStatus

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.pricing as defpricing
>>> print defpricing.PriceStatus.non_tradeable
non-tradeable
>>> c = defpricing.PriceStatus()
>>> print c[c.non_tradeable]
The Instrument's price is not tradeable.
>>> # or
>>> print defpricing.PriceStatus().definitions[c.non_tradeable]
>>> # all keys
>>> print defpricing.PriceStatus().definitions.keys()
>>> ...
```

Note: attribute name *non-tradeable* is renamed to *non_tradeable*, value stil is *non-tradeable*. This means that a lookup stil applies.

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

invalid = 'invalid'

non_tradeable = 'non-tradeable'

tradeable = 'tradeable'

4.5 oandapyV20.definitions.trades

Trades definitions.

class oandapyV20.definitions.trades.**TradePL**

Bases: object

Definition representation of TradePL

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.trades as deftrades
>>> print deftrades.TradePL.POSITIVE
POSITIVE
>>> c = deftrades.TradePL()
>>> print c[c.POSITIVE]
An open Trade currently has a positive (profitable) unrealized P/L, or a closed␣
↪Trade realized a positive amount of P/L.
>>> # or
>>> print deftrades.TradePL().definitions[c.POSITIVE]
>>> # all keys
>>> print deftrades.TradePL().definitions.keys()
>>> ...
```

NEGATIVE = 'NEGATIVE'

POSITIVE = 'POSITIVE'

ZERO = 'ZERO'

__getitem__(*definitionID*)

return description for definitionID.

definitions

readonly property holding definition dict.

class oandapyV20.definitions.trades.**TradeState**

Bases: object

Definition representation of TradeState

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.trades as deftrades
>>> print deftrades.TradeState.CLOSE_WHEN_TRADABLE
CLOSE_WHEN_TRADABLE
>>> c = deftrades.TradeState()
>>> print c[c.CLOSE_WHEN_TRADABLE]
The Trade will be closed as soon as the trade’s instrument becomes tradeable
>>> # or
>>> print deftrades.TradeState().definitions[c.CLOSE_WHEN_TRADABLE]
>>> # all keys
>>> print deftrades.TradeState().definitions.keys()
>>> ...
```

CLOSED = 'CLOSED'

CLOSE_WHEN_TRADABLE = 'CLOSE_WHEN_TRADABLE'

OPEN = 'OPEN'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.trades.**TradeStateFilter**
Bases: object

Definition representation of TradeStateFilter

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.trades as deftrades
>>> print deftrades.TradeStateFilter.CLOSE_WHEN_TRADEABLE
CLOSE_WHEN_TRADEABLE
>>> c = deftrades.TradeStateFilter()
>>> print c[c.CLOSE_WHEN_TRADEABLE]
The Trades that will be closed as soon as the trades' instrument becomes tradeable
>>> # or
>>> print deftrades.TradeStateFilter().definitions[c.CLOSE_WHEN_TRADEABLE]
>>> # all keys
>>> print deftrades.TradeStateFilter().definitions.keys()
>>> ...
```

ALL = 'ALL'

CLOSED = 'CLOSED'

CLOSE_WHEN_TRADEABLE = 'CLOSE_WHEN_TRADEABLE'

OPEN = 'OPEN'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

4.6 oandapyV20.definitions.transactions

Transactions definitions.

class oandapyV20.definitions.transactions.**MarketOrderMarginCloseoutReason**
Bases: object

Definition representation of MarketOrderMarginCloseoutReason

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.MarketOrderMarginCloseoutReason.MARGIN_CHECK_VIOLATION
MARGIN_CHECK_VIOLATION
>>> c = deftransactions.MarketOrderMarginCloseoutReason()
>>> print c[c.MARGIN_CHECK_VIOLATION]
Trade closures resulted from violating OANDA's margin policy
>>> # or
>>> print deftransactions.MarketOrderMarginCloseoutReason().definitions[c.MARGIN_
↪CHECK_VIOLATION]
>>> # all keys
```

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```
>>> print deftransactions.MarketOrderMarginCloseoutReason().definitions.keys()
>>> ...
```

MARGIN_CHECK_VIOLATION = 'MARGIN_CHECK_VIOLATION'

REGULATORY_MARGIN_CALL_VIOLATION = 'REGULATORY_MARGIN_CALL_VIOLATION'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.transactions.**StopLossOrderReason**
Bases: object

Definition representation of StopLossOrderReason

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.StopLossOrderReason.ON_FILL
ON_FILL
>>> c = deftransactions.StopLossOrderReason()
>>> print c[c.ON_FILL]
The Stop Loss Order was initiated automatically when an Order was filled that␣
↪opened a new Trade requiring a Stop Loss Order.
>>> # or
>>> print deftransactions.StopLossOrderReason().definitions[c.ON_FILL]
>>> # all keys
>>> print deftransactions.StopLossOrderReason().definitions.keys()
>>> ...
```

CLIENT_ORDER = 'CLIENT_ORDER'

ON_FILL = 'ON_FILL'

REPLACEMENT = 'REPLACEMENT'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.transactions.**OrderFillReason**
Bases: object

Definition representation of OrderFillReason

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.OrderFillReason.STOP_ORDER
STOP_ORDER
>>> c = deftransactions.OrderFillReason()
>>> print c[c.STOP_ORDER]
The Order filled was a Stop Order
>>> # or
>>> print deftransactions.OrderFillReason().definitions[c.STOP_ORDER]
>>> # all keys
```

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```
>>> print deftransactions.OrderFillReason().definitions.keys()
>>> ...
```

LIMIT_ORDER = 'LIMIT_ORDER'

MARKET_IF_TOUCHED_ORDER = 'MARKET_IF_TOUCHED_ORDER'

MARKET_ORDER = 'MARKET_ORDER'

MARKET_ORDER_DELAYED_TRADE_CLOSE = 'MARKET_ORDER_DELAYED_TRADE_CLOSE'

MARKET_ORDER_MARGIN_CLOSEOUT = 'MARKET_ORDER_MARGIN_CLOSEOUT'

MARKET_ORDER_POSITION_CLOSEOUT = 'MARKET_ORDER_POSITION_CLOSEOUT'

MARKET_ORDER_TRADE_CLOSE = 'MARKET_ORDER_TRADE_CLOSE'

STOP_LOSS_ORDER = 'STOP_LOSS_ORDER'

STOP_ORDER = 'STOP_ORDER'

TAKE_PROFIT_ORDER = 'TAKE_PROFIT_ORDER'

TRAILING_STOP_LOSS_ORDER = 'TRAILING_STOP_LOSS_ORDER'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.transactions.**FundingReason**
Bases: object

Definition representation of FundingReason

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.FundingReason.ACCOUNT_TRANSFER
ACCOUNT_TRANSFER
>>> c = deftransactions.FundingReason()
>>> print c[c.ACCOUNT_TRANSFER]
Funds are being transfered between two Accounts.
>>> # or
>>> print deftransactions.FundingReason().definitions[c.ACCOUNT_TRANSFER]
>>> # all keys
>>> print deftransactions.FundingReason().definitions.keys()
>>> ...
```

ACCOUNT_TRANSFER = 'ACCOUNT_TRANSFER'

ADJUSTMENT = 'ADJUSTMENT'

CLIENT_FUNDING = 'CLIENT_FUNDING'

DIVISION_MIGRATION = 'DIVISION_MIGRATION'

SITE_MIGRATION = 'SITE_MIGRATION'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.transactions.**MarketIfTouchedOrderReason**
Bases: object

Definition representation of MarketIfTouchedOrderReason

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.MarketIfTouchedOrderReason.CLIENT_ORDER
CLIENT_ORDER
>>> c = deftransactions.MarketIfTouchedOrderReason()
>>> print c[c.CLIENT_ORDER]
The Market-if-touched Order was initiated at the request of a client
>>> # or
>>> print deftransactions.MarketIfTouchedOrderReason().definitions[c.CLIENT_ORDER]
>>> # all keys
>>> print deftransactions.MarketIfTouchedOrderReason().definitions.keys()
>>> ...
```

CLIENT_ORDER = 'CLIENT_ORDER'

REPLACEMENT = 'REPLACEMENT'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.transactions.**FixedPriceOrderReason**
Bases: object

Definition representation of FixedPriceOrderReason

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.FixedPriceOrderReason.PLATFORM_ACCOUNT_MIGRATION
PLATFORM_ACCOUNT_MIGRATION
>>> c = deftransactions.FixedPriceOrderReason()
>>> print c[c.PLATFORM_ACCOUNT_MIGRATION]
The Fixed Price Order was created as part of a platform account migration
>>> # or
>>> print deftransactions.FixedPriceOrderReason().definitions[c.PLATFORM_ACCOUNT_
↪MIGRATION]
>>> # all keys
>>> print deftransactions.FixedPriceOrderReason().definitions.keys()
>>> ...
```

PLATFORM_ACCOUNT_MIGRATION = 'PLATFORM_ACCOUNT_MIGRATION'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.transactions.**MarketOrderReason**
Bases: object

Definition representation of MarketOrderReason

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.MarketOrderReason.TRADE_CLOSE
TRADE_CLOSE
>>> c = deftransactions.MarketOrderReason()
>>> print c[c.TRADE_CLOSE]
The Market Order was created to close a Trade at the request of a client
>>> # or
>>> print deftransactions.MarketOrderReason().definitions[c.TRADE_CLOSE]
>>> # all keys
>>> print deftransactions.MarketOrderReason().definitions.keys()
>>> ...
```

CLIENT_ORDER = 'CLIENT_ORDER'

DELAYED_TRADE_CLOSE = 'DELAYED_TRADE_CLOSE'

MARGIN_CLOSEOUT = 'MARGIN_CLOSEOUT'

POSITION_CLOSEOUT = 'POSITION_CLOSEOUT'

TRADE_CLOSE = 'TRADE_CLOSE'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.transactions.**StopOrderReason**
Bases: object

Definition representation of StopOrderReason

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.StopOrderReason.CLIENT_ORDER
CLIENT_ORDER
>>> c = deftransactions.StopOrderReason()
>>> print c[c.CLIENT_ORDER]
The Stop Order was initiated at the request of a client
>>> # or
>>> print deftransactions.StopOrderReason().definitions[c.CLIENT_ORDER]
>>> # all keys
>>> print deftransactions.StopOrderReason().definitions.keys()
>>> ...
```

CLIENT_ORDER = 'CLIENT_ORDER'

REPLACEMENT = 'REPLACEMENT'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.transactions.**TransactionType**
Bases: object

Definition representation of TransactionType

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.TransactionType.STOP_LOSS_ORDER
STOP_LOSS_ORDER
>>> c = deftransactions.TransactionType()
>>> print c[c.STOP_LOSS_ORDER]
Stop Loss Order Transaction
>>> # or
>>> print deftransactions.TransactionType().definitions[c.STOP_LOSS_ORDER]
>>> # all keys
>>> print deftransactions.TransactionType().definitions.keys()
>>> ...
```

CLIENT_CONFIGURE = 'CLIENT_CONFIGURE'

CLIENT_CONFIGURE_REJECT = 'CLIENT_CONFIGURE_REJECT'

CLOSE = 'CLOSE'

CREATE = 'CREATE'

DAILY_FINANCING = 'DAILY_FINANCING'

DELAYED_TRADE_CLOSURE = 'DELAYED_TRADE_CLOSURE'

FIXED_PRICE_ORDER = 'FIXED_PRICE_ORDER'

LIMIT_ORDER = 'LIMIT_ORDER'

LIMIT_ORDER_REJECT = 'LIMIT_ORDER_REJECT'

MARGIN_CALL_ENTER = 'MARGIN_CALL_ENTER'

MARGIN_CALL_EXIT = 'MARGIN_CALL_EXIT'

MARGIN_CALL_EXTEND = 'MARGIN_CALL_EXTEND'

MARKET_IF_TOUCHED_ORDER = 'MARKET_IF_TOUCHED_ORDER'

MARKET_IF_TOUCHED_ORDER_REJECT = 'MARKET_IF_TOUCHED_ORDER_REJECT'

MARKET_ORDER = 'MARKET_ORDER'

MARKET_ORDER_REJECT = 'MARKET_ORDER_REJECT'

ORDER_CANCEL = 'ORDER_CANCEL'

ORDER_CANCEL_REJECT = 'ORDER_CANCEL_REJECT'

ORDER_CLIENT_EXTENSIONS_MODIFY = 'ORDER_CLIENT_EXTENSIONS_MODIFY'

ORDER_CLIENT_EXTENSIONS_MODIFY_REJECT = 'ORDER_CLIENT_EXTENSIONS_MODIFY_REJECT'

ORDER_FILL = 'ORDER_FILL'

REOPEN = 'REOPEN'

RESET_RESETTABLE_PL = 'RESET_RESETTABLE_PL'

STOP_LOSS_ORDER = 'STOP_LOSS_ORDER'

STOP_LOSS_ORDER_REJECT = 'STOP_LOSS_ORDER_REJECT'

STOP_ORDER = 'STOP_ORDER'

STOP_ORDER_REJECT = 'STOP_ORDER_REJECT'

TAKE_PROFIT_ORDER = 'TAKE_PROFIT_ORDER'

TAKE_PROFIT_ORDER_REJECT = 'TAKE_PROFIT_ORDER_REJECT'

TRADE_CLIENT_EXTENSIONS_MODIFY = 'TRADE_CLIENT_EXTENSIONS_MODIFY'

TRADE_CLIENT_EXTENSIONS_MODIFY_REJECT = 'TRADE_CLIENT_EXTENSIONS_MODIFY_REJECT'

TRAILING_STOP_LOSS_ORDER = 'TRAILING_STOP_LOSS_ORDER'

TRAILING_STOP_LOSS_ORDER_REJECT = 'TRAILING_STOP_LOSS_ORDER_REJECT'

TRANSFER_FUNDS = 'TRANSFER_FUNDS'

TRANSFER_FUNDS_REJECT = 'TRANSFER_FUNDS_REJECT'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.transactions.**TakeProfitOrderReason**
Bases: object

Definition representation of TakeProfitOrderReason

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.TakeProfitOrderReason.ON_FILL
ON_FILL
>>> c = deftransactions.TakeProfitOrderReason()
>>> print c[c.ON_FILL]
The Take Profit Order was initiated automatically when an Order was filled that␣
↪opened a new Trade requiring a Take Profit Order.
>>> # or
>>> print deftransactions.TakeProfitOrderReason().definitions[c.ON_FILL]
>>> # all keys
>>> print deftransactions.TakeProfitOrderReason().definitions.keys()
>>> ...
```

CLIENT_ORDER = 'CLIENT_ORDER'

ON_FILL = 'ON_FILL'

REPLACEMENT = 'REPLACEMENT'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.transactions.**TransactionRejectReason**
Bases: object

Definition representation of TransactionRejectReason

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.TransactionRejectReason.STOP_LOSS_ORDER_GUARANTEED_
↪PRICE_WITHIN_SPREAD
STOP_LOSS_ORDER_GUARANTEED_PRICE_WITHIN_SPREAD
>>> c = deftransactions.TransactionRejectReason()
>>> print c[c.STOP_LOSS_ORDER_GUARANTEED_PRICE_WITHIN_SPREAD]
An attempt to create a guaranteed stop loss order with a price that is within the␣
↪current tradeable spread.
>>> # or
>>> print deftransactions.TransactionRejectReason().definitions[c.STOP_LOSS_ORDER_
↪GUARANTEED_PRICE_WITHIN_SPREAD]
>>> # all keys
>>> print deftransactions.TransactionRejectReason().definitions.keys()
>>> ...
```

ACCOUNT_CONFIGURATION_LOCKED = 'ACCOUNT_CONFIGURATION_LOCKED'

ACCOUNT_DEPOSIT_LOCKED = 'ACCOUNT_DEPOSIT_LOCKED'

ACCOUNT_LOCKED = 'ACCOUNT_LOCKED'

ACCOUNT_NOT_ACTIVE = 'ACCOUNT_NOT_ACTIVE'

ACCOUNT_ORDER_CANCEL_LOCKED = 'ACCOUNT_ORDER_CANCEL_LOCKED'

ACCOUNT_ORDER_CREATION_LOCKED = 'ACCOUNT_ORDER_CREATION_LOCKED'

ACCOUNT_WITHDRAWAL_LOCKED = 'ACCOUNT_WITHDRAWAL_LOCKED'

ADMIN_CONFIGURE_DATA_MISSING = 'ADMIN_CONFIGURE_DATA_MISSING'

ALIAS_INVALID = 'ALIAS_INVALID'

AMOUNT_INVALID = 'AMOUNT_INVALID'

AMOUNT_MISSING = 'AMOUNT_MISSING'

CLIENT_CONFIGURE_DATA_MISSING = 'CLIENT_CONFIGURE_DATA_MISSING'

CLIENT_EXTENSIONS_DATA_MISSING = 'CLIENT_EXTENSIONS_DATA_MISSING'

CLIENT_ORDER_COMMENT_INVALID = 'CLIENT_ORDER_COMMENT_INVALID'

CLIENT_ORDER_ID_ALREADY_EXISTS = 'CLIENT_ORDER_ID_ALREADY_EXISTS'

CLIENT_ORDER_ID_INVALID = 'CLIENT_ORDER_ID_INVALID'

CLIENT_ORDER_TAG_INVALID = 'CLIENT_ORDER_TAG_INVALID'

CLIENT_TRADE_COMMENT_INVALID = 'CLIENT_TRADE_COMMENT_INVALID'

CLIENT_TRADE_ID_ALREADY_EXISTS = 'CLIENT_TRADE_ID_ALREADY_EXISTS'

CLIENT_TRADE_ID_INVALID = 'CLIENT_TRADE_ID_INVALID'

CLIENT_TRADE_TAG_INVALID = 'CLIENT_TRADE_TAG_INVALID'

CLOSEOUT_POSITION_DOESNT_EXIST = 'CLOSEOUT_POSITION_DOESNT_EXIST'

CLOSEOUT_POSITION_INCOMPLETE_SPECIFICATION = 'CLOSEOUT_POSITION_INCOMPLETE_SPECIFICATI

CLOSEOUT_POSITION_PARTIAL_UNITS_MISSING = 'CLOSEOUT_POSITION_PARTIAL_UNITS_MISSING'

CLOSEOUT_POSITION_REJECT = 'CLOSEOUT_POSITION_REJECT'

CLOSEOUT_POSITION_UNITS_EXCEED_POSITION_SIZE = 'CLOSEOUT_POSITION_UNITS_EXCEED_POSITIO

CLOSE_TRADE_PARTIAL_UNITS_MISSING = 'CLOSE_TRADE_PARTIAL_UNITS_MISSING'

CLOSE_TRADE_TYPE_MISSING = 'CLOSE_TRADE_TYPE_MISSING'

CLOSE_TRADE_UNITS_EXCEED_TRADE_SIZE = 'CLOSE_TRADE_UNITS_EXCEED_TRADE_SIZE'

FUNDING_REASON_MISSING = 'FUNDING_REASON_MISSING'

INSTRUMENT_MISSING = 'INSTRUMENT_MISSING'

INSTRUMENT_NOT_TRADEABLE = 'INSTRUMENT_NOT_TRADEABLE'

INSTRUMENT_PRICE_UNKNOWN = 'INSTRUMENT_PRICE_UNKNOWN'

INSTRUMENT_UNKNOWN = 'INSTRUMENT_UNKNOWN'

INSUFFICIENT_FUNDS = 'INSUFFICIENT_FUNDS'

INSUFFICIENT_MARGIN = 'INSUFFICIENT_MARGIN'

INTERNAL_SERVER_ERROR = 'INTERNAL_SERVER_ERROR'

INVALID_REISSUE_IMMEDIATE_PARTIAL_FILL = 'INVALID_REISSUE_IMMEDIATE_PARTIAL_FILL'

MARGIN_RATE_INVALID = 'MARGIN_RATE_INVALID'

MARGIN_RATE_WOULD_TRIGGER_CLOSEOUT = 'MARGIN_RATE_WOULD_TRIGGER_CLOSEOUT'

MARGIN_RATE_WOULD_TRIGGER_MARGIN_CALL = 'MARGIN_RATE_WOULD_TRIGGER_MARGIN_CALL'

MARKUP_GROUP_ID_INVALID = 'MARKUP_GROUP_ID_INVALID'

ORDERS_ON_FILL_DUPLICATE_CLIENT_ORDER_IDS = 'ORDERS_ON_FILL_DUPLICATE_CLIENT_ORDER_IDS

ORDER_DOESNT_EXIST = 'ORDER_DOESNT_EXIST'

ORDER_FILL_POSITION_ACTION_INVALID = 'ORDER_FILL_POSITION_ACTION_INVALID'

ORDER_FILL_POSITION_ACTION_MISSING = 'ORDER_FILL_POSITION_ACTION_MISSING'

ORDER_IDENTIFIER_INCONSISTENCY = 'ORDER_IDENTIFIER_INCONSISTENCY'

ORDER_ID_UNSPECIFIED = 'ORDER_ID_UNSPECIFIED'

ORDER_PARTIAL_FILL_OPTION_INVALID = 'ORDER_PARTIAL_FILL_OPTION_INVALID'

ORDER_PARTIAL_FILL_OPTION_MISSING = 'ORDER_PARTIAL_FILL_OPTION_MISSING'

PENDING_ORDERS_ALLOWED_EXCEEDED = 'PENDING_ORDERS_ALLOWED_EXCEEDED'

POSITION_AGGREGATION_MODE_INVALID = 'POSITION_AGGREGATION_MODE_INVALID'

PRICE_BOUND_INVALID = 'PRICE_BOUND_INVALID'

PRICE_BOUND_PRECISION_EXCEEDED = 'PRICE_BOUND_PRECISION_EXCEEDED'

PRICE_DISTANCE_INVALID = 'PRICE_DISTANCE_INVALID'

PRICE_DISTANCE_MAXIMUM_EXCEEDED = 'PRICE_DISTANCE_MAXIMUM_EXCEEDED'

PRICE_DISTANCE_MINIMUM_NOT_MET = 'PRICE_DISTANCE_MINIMUM_NOT_MET'

PRICE_DISTANCE_MISSING = 'PRICE_DISTANCE_MISSING'

PRICE_DISTANCE_PRECISION_EXCEEDED = 'PRICE_DISTANCE_PRECISION_EXCEEDED'

PRICE_INVALID = 'PRICE_INVALID'

PRICE_MISSING = 'PRICE_MISSING'

PRICE_PRECISION_EXCEEDED = 'PRICE_PRECISION_EXCEEDED'

```
REPLACING_ORDER_INVALID = 'REPLACING_ORDER_INVALID'

REPLACING_TRADE_ID_INVALID = 'REPLACING_TRADE_ID_INVALID'

STOP_LOSS_ON_FILL_CLIENT_ORDER_COMMENT_INVALID = 'STOP_LOSS_ON_FILL_CLIENT_ORDER_COMME

STOP_LOSS_ON_FILL_CLIENT_ORDER_ID_INVALID = 'STOP_LOSS_ON_FILL_CLIENT_ORDER_ID_INVALID

STOP_LOSS_ON_FILL_CLIENT_ORDER_TAG_INVALID = 'STOP_LOSS_ON_FILL_CLIENT_ORDER_TAG_INVAL

STOP_LOSS_ON_FILL_DISTANCE_INVALID = 'STOP_LOSS_ON_FILL_DISTANCE_INVALID'

STOP_LOSS_ON_FILL_DISTANCE_PRECISION_EXCEEDED = 'STOP_LOSS_ON_FILL_DISTANCE_PRECISION_

STOP_LOSS_ON_FILL_GTD_TIMESTAMP_IN_PAST = 'STOP_LOSS_ON_FILL_GTD_TIMESTAMP_IN_PAST'

STOP_LOSS_ON_FILL_GTD_TIMESTAMP_MISSING = 'STOP_LOSS_ON_FILL_GTD_TIMESTAMP_MISSING'

STOP_LOSS_ON_FILL_GUARANTEED_LEVEL_RESTRICTION_EXCEEDED = 'STOP_LOSS_ON_FILL_GUARANTEE

STOP_LOSS_ON_FILL_GUARANTEED_MINIMUM_DISTANCE_NOT_MET = 'STOP_LOSS_ON_FILL_GUARANTEED_

STOP_LOSS_ON_FILL_GUARANTEED_NOT_ALLOWED = 'STOP_LOSS_ON_FILL_GUARANTEED_NOT_ALLOWED'

STOP_LOSS_ON_FILL_GUARANTEED_REQUIRED = 'STOP_LOSS_ON_FILL_GUARANTEED_REQUIRED'

STOP_LOSS_ON_FILL_PRICE_AND_DISTANCE_BOTH_MISSING = 'STOP_LOSS_ON_FILL_PRICE_AND_DISTA

STOP_LOSS_ON_FILL_PRICE_AND_DISTANCE_BOTH_SPECIFIED = 'STOP_LOSS_ON_FILL_PRICE_AND_DIS

STOP_LOSS_ON_FILL_PRICE_DISTANCE_MAXIMUM_EXCEEDED = 'STOP_LOSS_ON_FILL_PRICE_DISTANCE_

STOP_LOSS_ON_FILL_PRICE_INVALID = 'STOP_LOSS_ON_FILL_PRICE_INVALID'

STOP_LOSS_ON_FILL_PRICE_MISSING = 'STOP_LOSS_ON_FILL_PRICE_MISSING'

STOP_LOSS_ON_FILL_PRICE_PRECISION_EXCEEDED = 'STOP_LOSS_ON_FILL_PRICE_PRECISION_EXCEED

STOP_LOSS_ON_FILL_REQUIRED_FOR_PENDING_ORDER = 'STOP_LOSS_ON_FILL_REQUIRED_FOR_PENDING

STOP_LOSS_ON_FILL_TIME_IN_FORCE_INVALID = 'STOP_LOSS_ON_FILL_TIME_IN_FORCE_INVALID'

STOP_LOSS_ON_FILL_TIME_IN_FORCE_MISSING = 'STOP_LOSS_ON_FILL_TIME_IN_FORCE_MISSING'

STOP_LOSS_ON_FILL_TRIGGER_CONDITION_INVALID = 'STOP_LOSS_ON_FILL_TRIGGER_CONDITION_INV

STOP_LOSS_ON_FILL_TRIGGER_CONDITION_MISSING = 'STOP_LOSS_ON_FILL_TRIGGER_CONDITION_MIS

STOP_LOSS_ORDER_ALREADY_EXISTS = 'STOP_LOSS_ORDER_ALREADY_EXISTS'

STOP_LOSS_ORDER_GUARANTEED_HALTED_CREATE_VIOLATION = 'STOP_LOSS_ORDER_GUARANTEED_HALTE

STOP_LOSS_ORDER_GUARANTEED_HALTED_TIGHTEN_VIOLATION = 'STOP_LOSS_ORDER_GUARANTEED_HALT

STOP_LOSS_ORDER_GUARANTEED_HEDGING_NOT_ALLOWED = 'STOP_LOSS_ORDER_GUARANTEED_HEDGING_N

STOP_LOSS_ORDER_GUARANTEED_LEVEL_RESTRICTION_EXCEEDED = 'STOP_LOSS_ORDER_GUARANTEED_LE

STOP_LOSS_ORDER_GUARANTEED_MINIMUM_DISTANCE_NOT_MET = 'STOP_LOSS_ORDER_GUARANTEED_MINI

STOP_LOSS_ORDER_GUARANTEED_NOT_ALLOWED = 'STOP_LOSS_ORDER_GUARANTEED_NOT_ALLOWED'

STOP_LOSS_ORDER_GUARANTEED_PRICE_WITHIN_SPREAD = 'STOP_LOSS_ORDER_GUARANTEED_PRICE_WIT

STOP_LOSS_ORDER_GUARANTEED_REQUIRED = 'STOP_LOSS_ORDER_GUARANTEED_REQUIRED'

STOP_LOSS_ORDER_NOT_CANCELABLE = 'STOP_LOSS_ORDER_NOT_CANCELABLE'

STOP_LOSS_ORDER_NOT_REPLACEABLE = 'STOP_LOSS_ORDER_NOT_REPLACEABLE'

STOP_LOSS_ORDER_PRICE_AND_DISTANCE_BOTH_MISSING = 'STOP_LOSS_ORDER_PRICE_AND_DISTANCE_
```

```
STOP_LOSS_ORDER_PRICE_AND_DISTANCE_BOTH_SPECIFIED = 'STOP_LOSS_ORDER_PRICE_AND_DISTANC
TAKE_PROFIT_ON_FILL_CLIENT_ORDER_COMMENT_INVALID = 'TAKE_PROFIT_ON_FILL_CLIENT_ORDER_C
TAKE_PROFIT_ON_FILL_CLIENT_ORDER_ID_INVALID = 'TAKE_PROFIT_ON_FILL_CLIENT_ORDER_ID_INV
TAKE_PROFIT_ON_FILL_CLIENT_ORDER_TAG_INVALID = 'TAKE_PROFIT_ON_FILL_CLIENT_ORDER_TAG_I
TAKE_PROFIT_ON_FILL_GTD_TIMESTAMP_IN_PAST = 'TAKE_PROFIT_ON_FILL_GTD_TIMESTAMP_IN_PAST
TAKE_PROFIT_ON_FILL_GTD_TIMESTAMP_MISSING = 'TAKE_PROFIT_ON_FILL_GTD_TIMESTAMP_MISSING
TAKE_PROFIT_ON_FILL_PRICE_INVALID = 'TAKE_PROFIT_ON_FILL_PRICE_INVALID'
TAKE_PROFIT_ON_FILL_PRICE_MISSING = 'TAKE_PROFIT_ON_FILL_PRICE_MISSING'
TAKE_PROFIT_ON_FILL_PRICE_PRECISION_EXCEEDED = 'TAKE_PROFIT_ON_FILL_PRICE_PRECISION_EX
TAKE_PROFIT_ON_FILL_TIME_IN_FORCE_INVALID = 'TAKE_PROFIT_ON_FILL_TIME_IN_FORCE_INVALID
TAKE_PROFIT_ON_FILL_TIME_IN_FORCE_MISSING = 'TAKE_PROFIT_ON_FILL_TIME_IN_FORCE_MISSING
TAKE_PROFIT_ON_FILL_TRIGGER_CONDITION_INVALID = 'TAKE_PROFIT_ON_FILL_TRIGGER_CONDITION
TAKE_PROFIT_ON_FILL_TRIGGER_CONDITION_MISSING = 'TAKE_PROFIT_ON_FILL_TRIGGER_CONDITION
TAKE_PROFIT_ORDER_ALREADY_EXISTS = 'TAKE_PROFIT_ORDER_ALREADY_EXISTS'
TIME_IN_FORCE_GTD_TIMESTAMP_IN_PAST = 'TIME_IN_FORCE_GTD_TIMESTAMP_IN_PAST'
TIME_IN_FORCE_GTD_TIMESTAMP_MISSING = 'TIME_IN_FORCE_GTD_TIMESTAMP_MISSING'
TIME_IN_FORCE_INVALID = 'TIME_IN_FORCE_INVALID'
TIME_IN_FORCE_MISSING = 'TIME_IN_FORCE_MISSING'
TRADE_DOESNT_EXIST = 'TRADE_DOESNT_EXIST'
TRADE_IDENTIFIER_INCONSISTENCY = 'TRADE_IDENTIFIER_INCONSISTENCY'
TRADE_ID_UNSPECIFIED = 'TRADE_ID_UNSPECIFIED'
TRADE_ON_FILL_CLIENT_EXTENSIONS_NOT_SUPPORTED = 'TRADE_ON_FILL_CLIENT_EXTENSIONS_NOT_S
TRAILING_STOP_LOSS_ON_FILL_CLIENT_ORDER_COMMENT_INVALID = 'TRAILING_STOP_LOSS_ON_FILL_
TRAILING_STOP_LOSS_ON_FILL_CLIENT_ORDER_ID_INVALID = 'TRAILING_STOP_LOSS_ON_FILL_CLIEN
TRAILING_STOP_LOSS_ON_FILL_CLIENT_ORDER_TAG_INVALID = 'TRAILING_STOP_LOSS_ON_FILL_CLIE
TRAILING_STOP_LOSS_ON_FILL_GTD_TIMESTAMP_IN_PAST = 'TRAILING_STOP_LOSS_ON_FILL_GTD_TIM
TRAILING_STOP_LOSS_ON_FILL_GTD_TIMESTAMP_MISSING = 'TRAILING_STOP_LOSS_ON_FILL_GTD_TIM
TRAILING_STOP_LOSS_ON_FILL_PRICE_DISTANCE_INVALID = 'TRAILING_STOP_LOSS_ON_FILL_PRICE_
TRAILING_STOP_LOSS_ON_FILL_PRICE_DISTANCE_MAXIMUM_EXCEEDED = 'TRAILING_STOP_LOSS_ON_FI
TRAILING_STOP_LOSS_ON_FILL_PRICE_DISTANCE_MINIMUM_NOT_MET = 'TRAILING_STOP_LOSS_ON_FIL
TRAILING_STOP_LOSS_ON_FILL_PRICE_DISTANCE_MISSING = 'TRAILING_STOP_LOSS_ON_FILL_PRICE_
TRAILING_STOP_LOSS_ON_FILL_PRICE_DISTANCE_PRECISION_EXCEEDED = 'TRAILING_STOP_LOSS_ON_
TRAILING_STOP_LOSS_ON_FILL_TIME_IN_FORCE_INVALID = 'TRAILING_STOP_LOSS_ON_FILL_TIME_IN
TRAILING_STOP_LOSS_ON_FILL_TIME_IN_FORCE_MISSING = 'TRAILING_STOP_LOSS_ON_FILL_TIME_IN
TRAILING_STOP_LOSS_ON_FILL_TRIGGER_CONDITION_INVALID = 'TRAILING_STOP_LOSS_ON_FILL_TRI
TRAILING_STOP_LOSS_ON_FILL_TRIGGER_CONDITION_MISSING = 'TRAILING_STOP_LOSS_ON_FILL_TRI
```

TRAILING_STOP_LOSS_ORDERS_NOT_SUPPORTED = 'TRAILING_STOP_LOSS_ORDERS_NOT_SUPPORTED'

TRAILING_STOP_LOSS_ORDER_ALREADY_EXISTS = 'TRAILING_STOP_LOSS_ORDER_ALREADY_EXISTS'

TRIGGER_CONDITION_INVALID = 'TRIGGER_CONDITION_INVALID'

TRIGGER_CONDITION_MISSING = 'TRIGGER_CONDITION_MISSING'

UNITS_INVALID = 'UNITS_INVALID'

UNITS_LIMIT_EXCEEDED = 'UNITS_LIMIT_EXCEEDED'

UNITS_MIMIMUM_NOT_MET = 'UNITS_MIMIMUM_NOT_MET'

UNITS_MISSING = 'UNITS_MISSING'

UNITS_PRECISION_EXCEEDED = 'UNITS_PRECISION_EXCEEDED'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.transactions.**OrderCancelReason**
Bases: object

Definition representation of OrderCancelReason

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.OrderCancelReason.TAKE_PROFIT_ON_FILL_GTD_TIMESTAMP_IN_
↪PAST
TAKE_PROFIT_ON_FILL_GTD_TIMESTAMP_IN_PAST
>>> c = deftransactions.OrderCancelReason()
>>> print c[c.TAKE_PROFIT_ON_FILL_GTD_TIMESTAMP_IN_PAST]
Filling the Order would have resulted in the creation of a Take Profit Order with␣
↪a GTD time in the past.
>>> # or
>>> print deftransactions.OrderCancelReason().definitions[c.TAKE_PROFIT_ON_FILL_
↪GTD_TIMESTAMP_IN_PAST]
>>> # all keys
>>> print deftransactions.OrderCancelReason().definitions.keys()
>>> ...
```

ACCOUNT_LOCKED = 'ACCOUNT_LOCKED'

ACCOUNT_NEW_POSITIONS_LOCKED = 'ACCOUNT_NEW_POSITIONS_LOCKED'

ACCOUNT_ORDER_CREATION_LOCKED = 'ACCOUNT_ORDER_CREATION_LOCKED'

ACCOUNT_ORDER_FILL_LOCKED = 'ACCOUNT_ORDER_FILL_LOCKED'

ACCOUNT_POSITION_VALUE_LIMIT_EXCEEDED = 'ACCOUNT_POSITION_VALUE_LIMIT_EXCEEDED'

BOUNDS_VIOLATION = 'BOUNDS_VIOLATION'

CLIENT_REQUEST = 'CLIENT_REQUEST'

CLIENT_REQUEST_REPLACED = 'CLIENT_REQUEST_REPLACED'

CLIENT_TRADE_ID_ALREADY_EXISTS = 'CLIENT_TRADE_ID_ALREADY_EXISTS'

FIFO_VIOLATION = 'FIFO_VIOLATION'

HEDGING_GSLO_VIOLATION = 'HEDGING_GSLO_VIOLATION'

INSUFFICIENT_LIQUIDITY = 'INSUFFICIENT_LIQUIDITY'

INSUFFICIENT_MARGIN = 'INSUFFICIENT_MARGIN'

INTERNAL_SERVER_ERROR = 'INTERNAL_SERVER_ERROR'

LINKED_TRADE_CLOSED = 'LINKED_TRADE_CLOSED'

LOSING_TAKE_PROFIT = 'LOSING_TAKE_PROFIT'

MARKET_HALTED = 'MARKET_HALTED'

MIGRATION = 'MIGRATION'

OPEN_TRADES_ALLOWED_EXCEEDED = 'OPEN_TRADES_ALLOWED_EXCEEDED'

PENDING_ORDERS_ALLOWED_EXCEEDED = 'PENDING_ORDERS_ALLOWED_EXCEEDED'

POSITION_CLOSEOUT_FAILED = 'POSITION_CLOSEOUT_FAILED'

POSITION_SIZE_EXCEEDED = 'POSITION_SIZE_EXCEEDED'

STOP_LOSS_ON_FILL_CLIENT_ORDER_ID_ALREADY_EXISTS = 'STOP_LOSS_ON_FILL_CLIENT_ORDER_ID_A

STOP_LOSS_ON_FILL_GTD_TIMESTAMP_IN_PAST = 'STOP_LOSS_ON_FILL_GTD_TIMESTAMP_IN_PAST'

STOP_LOSS_ON_FILL_GUARANTEED_HEDGING_NOT_ALLOWED = 'STOP_LOSS_ON_FILL_GUARANTEED_HEDGI

STOP_LOSS_ON_FILL_GUARANTEED_LEVEL_RESTRICTION_EXCEEDED = 'STOP_LOSS_ON_FILL_GUARANTEE

STOP_LOSS_ON_FILL_GUARANTEED_MINIMUM_DISTANCE_NOT_MET = 'STOP_LOSS_ON_FILL_GUARANTEED_

STOP_LOSS_ON_FILL_GUARANTEED_NOT_ALLOWED = 'STOP_LOSS_ON_FILL_GUARANTEED_NOT_ALLOWED'

STOP_LOSS_ON_FILL_GUARANTEED_REQUIRED = 'STOP_LOSS_ON_FILL_GUARANTEED_REQUIRED'

STOP_LOSS_ON_FILL_LOSS = 'STOP_LOSS_ON_FILL_LOSS'

STOP_LOSS_ON_FILL_PRICE_DISTANCE_MAXIMUM_EXCEEDED = 'STOP_LOSS_ON_FILL_PRICE_DISTANCE_

STOP_LOSS_ON_FILL_REQUIRED = 'STOP_LOSS_ON_FILL_REQUIRED'

STOP_LOSS_ON_FILL_TIME_IN_FORCE_INVALID = 'STOP_LOSS_ON_FILL_TIME_IN_FORCE_INVALID'

STOP_LOSS_ON_FILL_TRIGGER_CONDITION_INVALID = 'STOP_LOSS_ON_FILL_TRIGGER_CONDITION_INV

TAKE_PROFIT_ON_FILL_CLIENT_ORDER_ID_ALREADY_EXISTS = 'TAKE_PROFIT_ON_FILL_CLIENT_ORDER_

TAKE_PROFIT_ON_FILL_GTD_TIMESTAMP_IN_PAST = 'TAKE_PROFIT_ON_FILL_GTD_TIMESTAMP_IN_PAST

TAKE_PROFIT_ON_FILL_LOSS = 'TAKE_PROFIT_ON_FILL_LOSS'

TAKE_PROFIT_ON_FILL_PRICE_DISTANCE_MAXIMUM_EXCEEDED = 'TAKE_PROFIT_ON_FILL_PRICE_DISTA

TIME_IN_FORCE_EXPIRED = 'TIME_IN_FORCE_EXPIRED'

TRAILING_STOP_LOSS_ON_FILL_CLIENT_ORDER_ID_ALREADY_EXISTS = 'TRAILING_STOP_LOSS_ON_FIL

TRAILING_STOP_LOSS_ON_FILL_GTD_TIMESTAMP_IN_PAST = 'TRAILING_STOP_LOSS_ON_FILL_GTD_TIM

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.transactions.**TrailingStopLossOrderReason**
Bases: `object`

Definition representation of TrailingStopLossOrderReason

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.TrailingStopLossOrderReason.ON_FILL
ON_FILL
>>> c = deftransactions.TrailingStopLossOrderReason()
>>> print c[c.ON_FILL]
The Trailing Stop Loss Order was initiated automatically when an Order was filled␣
↪that opened a new Trade requiring a Trailing Stop Loss Order.
>>> # or
>>> print deftransactions.TrailingStopLossOrderReason().definitions[c.ON_FILL]
>>> # all keys
>>> print deftransactions.TrailingStopLossOrderReason().definitions.keys()
>>> ...
```

CLIENT_ORDER = 'CLIENT_ORDER'

ON_FILL = 'ON_FILL'

REPLACEMENT = 'REPLACEMENT'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

class oandapyV20.definitions.transactions.**LimitOrderReason**
Bases: object

Definition representation of LimitOrderReason

Definitions used in requests and responses. This class provides the ID and the description of the definitions.

```
>>> import oandapyV20.definitions.transactions as deftransactions
>>> print deftransactions.LimitOrderReason.CLIENT_ORDER
CLIENT_ORDER
>>> c = deftransactions.LimitOrderReason()
>>> print c[c.CLIENT_ORDER]
The Limit Order was initiated at the request of a client
>>> # or
>>> print deftransactions.LimitOrderReason().definitions[c.CLIENT_ORDER]
>>> # all keys
>>> print deftransactions.LimitOrderReason().definitions.keys()
>>> ...
```

CLIENT_ORDER = 'CLIENT_ORDER'

REPLACEMENT = 'REPLACEMENT'

__getitem__(*definitionID*)
return description for definitionID.

definitions
readonly property holding definition dict.

CHAPTER 5

oandapyV20.types

The `oandapyV20.types` module contains the types representing the types that are used in the API-specs of OANDA, check developer.oanda.com. These types offer a convenient interface between Python types and the types used in the REST-API.

Take for instance the *PriceValue* type. It is the string representation of a float.

```
from oandapyV20.types import PriceValue

pv1 = PriceValue(122.345)
pv2 = PriceValue("122.345")
pv1.value
"122.345"
pv1.value == pv2.value
True
```

Regardless the value we instantiate it with, a float or a string, the PriceValue instance will allways be a string value.

The types also validate the values passed. Invalid values will raise an exception.

5.1 AccountID

class `oandapyV20.types.`**`AccountID`**(*accountID*)

representation of an AccountID, string value of an Account Identifier.

Parameters **`accountID`** (*string (required)*) – the accountID of a v20 account

Example

```
>>> print AccountID("001-011-5838423-001").value
```

A ValueError exception is raised in case of an incorrect value.

__init__(*accountID*)
x.__init__(...) initializes x; see help(type(x)) for signature

value
value property.

5.2 AccountUnits

class oandapyV20.types.**AccountUnits**(*units*)
representation AccountUnits, string value of a float.

__init__(*units*)
x.__init__(...) initializes x; see help(type(x)) for signature

value
value property.

5.3 ClientComment

class oandapyV20.types.**ClientComment**(*clientComment*)
representation of ClientComment, a string value of max 128 chars.

__init__(*clientComment*)
x.__init__(...) initializes x; see help(type(x)) for signature

value
value property.

5.4 ClientID

class oandapyV20.types.**ClientID**(*clientID*)
representation of ClientID, a string value of max 128 chars.

__init__(*clientID*)
x.__init__(...) initializes x; see help(type(x)) for signature

value
value property.

5.5 ClientTag

class oandapyV20.types.**ClientTag**(*clientTag*)
representation of ClientTag, a string value of max 128 chars.

__init__(*clientTag*)
x.__init__(...) initializes x; see help(type(x)) for signature

value
value property.

5.6 DateTime

class oandapyV20.types.**DateTime**(*dateTime*)
representation of a DateTime as a RFC 3339 string.

Parameters

- **dateTime** (*string, datetime instance, dict (required)*) –

  the dateTime parameter must be:

  – a valid RFC3339 string representing a date-time, or

  – a dict holding the relevant datetime parts, or

  – a datetime.datetime instance
- **value property is always RFC3339 datetime string** (*The*) –
- **seconds are in microseconds. This compatible with** (*Fractional*) –
- **datetime.datetime.** –

Example

```
>>> print DateTime("2014-07-02T04:00:00.000000Z").value
>>> print DateTime({"year": 2014, "month": 12, "day": 2,
...                 "hour": 13, "minute": 48, "second": 12}).value
>>> from datetime import datetime
>>> print DateTime(datetime.now()).value
```

A ValueError exception is raised in case of an invalid value

__init__(*dateTime*)
x.__init__(...) initializes x; see help(type(x)) for signature

value
value property.

5.7 OrderID

class oandapyV20.types.**OrderID**(*orderID*)
representation of an orderID, string value of an integer.

Parameters **orderID** (*integer or string (required)*) – the orderID as a positive integer or as a string

Example

```
>>> print OrderID(1234).value
```

A ValueError exception is raised in case of a negative integer value

__init__(*orderID*)
x.__init__(...) initializes x; see help(type(x)) for signature

value
value property.

5.8 OrderIdentifier

class oandapyV20.types.**OrderIdentifier**(*orderID*, *clientID*)
representation of the OrderIdentifier object.

__init__(*orderID*, *clientID*)
x.__init__(...) initializes x; see help(type(x)) for signature

value
value property.

5.9 OrderSpecifier

class oandapyV20.types.**OrderSpecifier**(*specifier*)
representation of the OrderSpecifier.

__init__(*specifier*)
x.__init__(...) initializes x; see help(type(x)) for signature

value
value property.

5.10 PriceValue

class oandapyV20.types.**PriceValue**(*priceValue*)
representation PriceValue, string value of a float.

__init__(*priceValue*)
x.__init__(...) initializes x; see help(type(x)) for signature

value
value property.

5.11 TradeID

class oandapyV20.types.**TradeID**(*tradeID*)
representation of a tradeID, string value of an integer.

Parameters **tradeID** (*integer or string (required)*) – the tradeID as a positive integer or as a string

Example

```
>>> print TradeID(1234).value
```

A ValueError exception is raised in case of a negative integer value

`__init__`(*tradeID*)
x.__init__(...) initializes x; see help(type(x)) for signature

`value`
value property.

5.12 Units

class `oandapyV20.types.`**`Units`**(*units*)
representation Units, string value of an integer.

`__init__`(*units*)
x.__init__(...) initializes x; see help(type(x)) for signature

`value`
value property.

CHAPTER 6

oandapyV20.contrib

6.1 Factories

The `oandapyV20.contrib.factories` module contains several classes / methods that can be used optionally to generate requests.

6.1.1 InstrumentsCandlesFactory

`oandapyV20.contrib.factories.`**`InstrumentsCandlesFactory`**(*instrument*, *params=None*)

InstrumentsCandlesFactory - generate InstrumentCandles requests.

InstrumentsCandlesFactory is used to retrieve historical data by automatically generating consecutive requests when the OANDA limit of *count* records is exceeded.

This is known by calculating the number of candles between *from* and *to*. If *to* is not specified *to* will be equal to *now*.

The *count* parameter is only used to control the number of records to retrieve in a single request.

The *includeFirst* parameter is forced to make sure that results do no have a 1-record gap between consecutive requests.

Parameters

- **instrument** (*string (required)*) – the instrument to create the order for
- **params** (*params (optional)*) – the parameters to specify the historical range, see the REST-V20 docs regarding 'instrument' at developer.oanda.com If no params are specified, just a single InstrumentsCandles request will be generated acting the same as if you had just created it directly.

Example

The *oandapyV20.API* client processes requests as objects. So, downloading large historical batches simply comes down to:

```
>>> import json
>>> from oandapyV20 import API
>>> from oandapyV20.contrib.factories import InstrumentsCandlesFactory
>>>
>>> client = API(access_token=...)
>>> instrument, granularity = "EUR_USD", "M15"
>>> _from = "2017-01-01T00:00:00Z"
>>> params = {
...     "from": _from,
...     "granularity": granularity,
...     "count": 2500,
... }
>>> with open("/tmp/{}.{}".format(instrument, granularity), "w") as OUT:
>>>     # The factory returns a generator generating consecutive
>>>     # requests to retrieve full history from date 'from' till 'to'
>>>     for r in InstrumentsCandlesFactory(instrument=instrument,
...                                        params=params)
>>>         client.request(r)
>>>         OUT.write(json.dumps(r.response.get('candles'), indent=2))
```

Note: Normally you can't combine *from*, *to* and *count*. When *count* specified, it is used to calculate the gap between *to* and *from*. The *params* passed to the generated request itself does contain the *count* parameter.

6.2 Generic

The `oandapyV20.contrib.generic` module contains several classes / methods that serve a generic purpose.

6.2.1 granularity_to_time

`oandapyV20.contrib.generic.`**`granularity_to_time`**`(s)`

convert a named granularity into seconds.

get value in seconds for named granularities: M1, M5 … H1 etc.

```
>>> print(granularity_to_time("M5"))
300
```

`oandapyV20.contrib.generic.`**`secs2time`**`(e)`

secs2time - convert epoch to datetime.

```
>>> d = secs2time(1497499200)
>>> d
datetime.datetime(2017, 6, 15, 4, 0)
>>> d.strftime("%Y%m%d-%H:%M:%S")
'20170615-04:00:00'
```

6.3 Order Classes

The `oandapyV20.contrib.requests` module contains several classes that can be used optionally when creating Order Requests.

When creating an order to create a position, it is possible to create dependant orders that will be triggered when the position gets filled. This goes typically for *Take Profit* and *Stop Loss*.

These order specifications and additional data that goes with these order specifications can be created by the contrib.requests.*Order* classes and the contrib.requests.*Details classes.

6.3.1 LimitOrderRequest

class `oandapyV20.contrib.requests.`**`LimitOrderRequest`**(*instrument*, *units*, *price*, *positionFill='DEFAULT'*, *clientExtensions=None*, *takeProfitOnFill=None*, *timeInForce='GTC'*, *gtdTime=None*, *stopLossOnFill=None*, *trailingStopLossOnFill=None*, *tradeClientExtensions=None*)

Bases: `oandapyV20.contrib.requests.baserequest.BaseRequest`

create a LimitOrderRequest.

LimitOrderRequest is used to build the body for a LimitOrder. The body can be used to pass to the OrderCreate endpoint.

`__init__`(*instrument*, *units*, *price*, *positionFill='DEFAULT'*, *clientExtensions=None*, *takeProfitOnFill=None*, *timeInForce='GTC'*, *gtdTime=None*, *stopLossOnFill=None*, *trailingStopLossOnFill=None*, *tradeClientExtensions=None*)

Instantiate a LimitOrderRequest.

Parameters

- **instrument** (*string (required)*) – the instrument to create the order for
- **units** (*integer (required)*) – the number of units. If positive the order results in a LONG order. If negative the order results in a SHORT order
- **price** (*float (required)*) – the price indicating the limit.

Example

```
>>> import json
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.orders as orders
>>> from oandapyV20.contrib.requests import LimitOrderRequest
>>>
>>> accountID = "..."
>>> client = API(access_token=...)
>>> ordr = LimitOrderRequest(instrument="EUR_USD",
...                          units=10000, price=1.08)
>>> print(json.dumps(ordr.data, indent=4))
{
    "order": {
        "timeInForce": "GTC",
```

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```
        "instrument": "EUR_USD",
        "units": "10000",
        "price": "1.08000",
        "type": "LIMIT",
        "positionFill": "DEFAULT"
    }
}
>>> r = orders.orderCreate(accountID, data=ordr.data)
>>> rv = client.request(r)
>>>
```

data

data property.

return the JSON order body

6.3.2 MarketOrderRequest

class oandapyV20.contrib.requests.**MarketOrderRequest**(*instrument*, *units*, *priceBound=None*, *positionFill='DEFAULT'*, *clientExtensions=None*, *takeProfitOnFill=None*, *timeInForce='FOK'*, *stopLossOnFill=None*, *trailingStopLossOnFill=None*, *tradeClientExtensions=None*)

Bases: `oandapyV20.contrib.requests.baserequest.BaseRequest`

create a MarketOrderRequest.

MarketOrderRequest is used to build the body for a MarketOrder. The body can be used to pass to the OrderCreate endpoint.

__init__(*instrument*, *units*, *priceBound=None*, *positionFill='DEFAULT'*, *clientExtensions=None*, *takeProfitOnFill=None*, *timeInForce='FOK'*, *stopLossOnFill=None*, *trailingStopLossOnFill=None*, *tradeClientExtensions=None*)

Instantiate a MarketOrderRequest.

Parameters

- **instrument** (*string (required)*) – the instrument to create the order for
- **units** (*integer (required)*) – the number of units. If positive the order results in a LONG order. If negative the order results in a SHORT order

Example

```
>>> import json
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.orders as orders
>>> from oandapyV20.contrib.requests import MarketOrderRequest
>>>
>>> accountID = "..."
>>> client = API(access_token=...)
```

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```
>>> mo = MarketOrderRequest(instrument="EUR_USD", units=10000)
>>> print(json.dumps(mo.data, indent=4))
{
    "order": {
        "type": "MARKET",
        "positionFill": "DEFAULT",
        "instrument": "EUR_USD",
        "timeInForce": "FOK",
        "units": "10000"
    }
}
>>> # now we have the order specification, create the order request
>>> r = orders.OrderCreate(accountID, data=mo.data)
>>> # perform the request
>>> rv = client.request(r)
>>> print(rv)
>>> print(json.dumps(rv, indent=4))
{
    "orderFillTransaction": {
        "reason": "MARKET_ORDER",
        "pl": "0.0000",
        "accountBalance": "97864.8813",
        "units": "10000",
        "instrument": "EUR_USD",
        "accountID": "101-004-1435156-001",
        "time": "2016-11-11T19:59:43.253587917Z",
        "type": "ORDER_FILL",
        "id": "2504",
        "financing": "0.0000",
        "tradeOpened": {
            "tradeID": "2504",
            "units": "10000"
        },
        "orderID": "2503",
        "userID": 1435156,
        "batchID": "2503",
        "price": "1.08463"
    },
    "lastTransactionID": "2504",
    "relatedTransactionIDs": [
        "2503",
        "2504"
    ],
    "orderCreateTransaction": {
        "type": "MARKET_ORDER",
        "reason": "CLIENT_ORDER",
        "id": "2503",
        "timeInForce": "FOK",
        "units": "10000",
        "time": "2016-11-11T19:59:43.253587917Z",
        "positionFill": "DEFAULT",
        "accountID": "101-004-1435156-001",
        "instrument": "EUR_USD",
        "batchID": "2503",
        "userID": 1435156
    }
}
```

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```
>>>
```

data

data property.

return the JSON body.

6.3.3 MITOrderRequest

class oandapyV20.contrib.requests.**MITOrderRequest**(*instrument*, *units*, *price*, *priceBound=None*, *positionFill='DEFAULT'*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*, *takeProfitOnFill=None*, *stopLossOnFill=None*, *trailingStopLossOnFill=None*, *tradeClientExtensions=None*)

Bases: oandapyV20.contrib.requests.baserequest.BaseRequest

create a MarketIfTouched OrderRequest.

MITOrderRequest is used to build the body for a MITOrder. The body can be used to pass to the OrderCreate endpoint.

__init__(*instrument*, *units*, *price*, *priceBound=None*, *positionFill='DEFAULT'*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*, *takeProfitOnFill=None*, *stopLossOnFill=None*, *trailingStopLossOnFill=None*, *tradeClientExtensions=None*)

Instantiate an MITOrderRequest.

Parameters

- **instrument** (*string (required)*) – the instrument to create the order for
- **units** (*integer (required)*) – the number of units. If positive the order results in a LONG order. If negative the order results in a SHORT order
- **price** (*float (required)*) – the price indicating the limit.

Example

```
>>> import json
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.orders as orders
>>> from oandapyV20.contrib.requests import MITOrderRequest
>>>
>>> accountID = "..."
>>> client = API(access_token=...)
>>> ordr = MITOrderRequest(instrument="EUR_USD",
...                        units=10000, price=1.08)
>>> print(json.dumps(ordr.data, indent=4))
{
    "order": {
        "timeInForce": "GTC",
        "instrument": "EUR_USD",
        "units": "10000",
```

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```
        "price": "1.08000",
        "type": "MARKET_IF_TOUCHED",
        "positionFill": "DEFAULT"
    }
}
>>> r = orders.OrderCreate(accountID, data=ordr.data)
>>> rv = client.request(r)
>>> ...
```

data
data property.

return the JSON order body

6.3.4 PositionCloseRequest

class oandapyV20.contrib.requests.**PositionCloseRequest**(*longUnits=None*, *longClientExtensions=None*, *shortUnits=None*, *shortClientExtensions=None*)

Bases: oandapyV20.contrib.requests.baserequest.BaseRequest

create a PositionCloseRequest.

PositionCloseRequest is used to build the body to close a position. The body can be used to pass to the PositionClose endpoint.

__init__(*longUnits=None*, *longClientExtensions=None*, *shortUnits=None*, *shortClientExtensions=None*)
Instantiate a PositionCloseRequest.

Parameters

- **longUnits** (*integer (optional)*) – the number of long units to close
- **longClientExtensions** (*dict (optional)*) – dict representing longClientExtensions
- **shortUnits** (*integer (optional)*) – the number of short units to close
- **shortClientExtensions** (*dict (optional)*) – dict representing shortClientExtensions

One of the parameters or both must be supplied.

Example

```
>>> import json
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.positions as positions
>>> from oandapyV20.contrib.requests import PositionCloseRequest
>>>
>>> accountID = "..."
>>> client = API(access_token=...)
>>> ordr = PositionCloseRequest(longUnits=10000)
>>> print(json.dumps(ordr.data, indent=4))
{
```

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```
    "longUnits": "10000"
}
>>> # now we have the order specification, create the order request
>>> r = position.PositionClose(accountID,
>>>                               instrument="EUR_USD", data=ordr.data)
>>> # perform the request
>>> rv = client.request(r)
>>> print(rv)
>>> ...
```

6.3.5 StopLossOrderRequest

class `oandapyV20.contrib.requests.`**`StopLossOrderRequest`**(*tradeID*, *price*, *clientTradeID=None*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*)

Bases: `oandapyV20.contrib.requests.baserequest.BaseRequest`

create a StopLossOrderRequest.

StopLossOrderRequest is used to build the body for a StopLossOrder. The body can be used to pass to the OrderCreate endpoint.

`__init__`(*tradeID*, *price*, *clientTradeID=None*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*)

Instantiate a StopLossOrderRequest.

Parameters

- **tradeID** (*string (required)*) – the tradeID of an existing trade
- **price** (*float (required)*) – the treshold price indicating the price to close the order

Example

```
>>> import json
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.orders as orders
>>> from oandapyV20.contrib.requests import StopLossOrderRequest
>>>
>>> accountID = "..."
>>> client = API(access_token=...)
>>> ordr = StopLossOrderRequest(tradeID="1234", price=1.07)
>>> print(json.dumps(ordr.data, indent=4))
{
    "order": {
        "type": "STOP_LOSS",
        "tradeID": "1234",
        "price": "1.07000",
        "timeInForce": "GTC",
    }
}
>>> # now we have the order specification, create the order request
```

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```
>>> r = orders.OrderCreate(accountID, data=ordr.data)
>>> # perform the request
>>> rv = client.request(r)
>>> print(json.dumps(rv, indent=4))
>>> ...
```

data
data property.

return the JSON body.

6.3.6 StopOrderRequest

class oandapyV20.contrib.requests.**StopOrderRequest**(*instrument, units, price, priceBound=None, positionFill='DEFAULT', timeInForce='GTC', gtdTime=None, clientExtensions=None, takeProfitOnFill=None, stopLossOnFill=None, trailingStopLossOnFill=None, tradeClientExtensions=None*)

Bases: `oandapyV20.contrib.requests.baserequest.BaseRequest`

create a StopOrderRequest.

StopOrderRequest is used to build the body for an StopOrder. The body can be used to pass to the OrderCreate endpoint.

__init__(*instrument, units, price, priceBound=None, positionFill='DEFAULT', timeInForce='GTC', gtdTime=None, clientExtensions=None, takeProfitOnFill=None, stopLossOnFill=None, trailingStopLossOnFill=None, tradeClientExtensions=None*)

Instantiate a StopOrderRequest.

Parameters

- **instrument** (*string (required)*) – the instrument to create the order for
- **units** (*integer (required)*) – the number of units. If positive the order results in a LONG order. If negative the order results in a SHORT order
- **price** (*float (required)*) – the treshold price indicating the price to activate the order

Example

```
>>> import json
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.orders as orders
>>> from oandapyV20.contrib.requests import StopOrderRequest
>>>
>>> accountID = "..."
>>> client = API(access_token=...)
>>> ordr = StopOrderRequest(instrument="EUR_USD",
...                         units=10000, price=1.07)
>>> print(json.dumps(ordr.data, indent=4))
```

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```
{
    "order": {
        "type": "STOP",
        "price": "1.07000",
        "positionFill": "DEFAULT",
        "instrument": "EUR_USD",
        "timeInForce": "GTC",
        "units": "10000"
    }
}
>>> # now we have the order specification, create the order request
>>> r = orders.OrderCreate(accountID, data=ordr.data)
>>> # perform the request
>>> rv = client.request(r)
>>> print(json.dumps(rv, indent=4))
>>> ...
```

data

data property.

return the JSON body.

6.3.7 TakeProfitOrderRequest

class oandapyV20.contrib.requests.**TakeProfitOrderRequest**(*tradeID*, *price*, *clientTradeID=None*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*)

Bases: oandapyV20.contrib.requests.baserequest.BaseRequest

create a TakeProfit OrderRequest.

TakeProfitOrderRequest is used to build the body for a TakeProfitOrder. The body can be used to pass to the OrderCreate endpoint.

__init__(*tradeID*, *price*, *clientTradeID=None*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*)

Instantiate a TakeProfitOrderRequest.

Parameters

- **tradeID** (*string (required)*) – the tradeID of an existing trade
- **price** (*float (required)*) – the price indicating the target price to close the order.

Example

```
>>> import json
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.orders as orders
>>> from oandapyV20.contrib.requests import TakeProfitOrderRequest
>>>
>>> accountID = "..."
>>> client = API(access_token=...)
>>> ordr = TakeProfitOrderRequest(tradeID="1234",
```

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```
>>>                               price=1.22)
>>> print(json.dumps(ordr.data, indent=4))
{
    "order": {
        "timeInForce": "GTC",
        "price": "1.22000",
        "type": "TAKE_PROFIT",
        "tradeID": "1234"
    }
}
>>> r = orders.OrderCreate(accountID, data=ordr.data)
>>> rv = client.request(r)
>>> ...
```

data

data property.

return the JSON order body

6.3.8 TradeCloseRequest

class oandapyV20.contrib.requests.**TradeCloseRequest**(*units='ALL'*)

Bases: oandapyV20.contrib.requests.baserequest.BaseRequest

create a TradeCloseRequest.

TradeCloseRequest is used to build the body to close a trade. The body can be used to pass to the TradeClose endpoint.

__init__(*units='ALL'*)

Instantiate a TradeCloseRequest.

Parameters units (*integer (optional)*) – the number of units to close. Default it is set to “ALL”.

Example

```
>>> import json
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.trades as trades
>>> from oandapyV20.contrib.requests import TradeCloseRequest
>>>
>>> accountID = "..."
>>> client = API(access_token=...)
>>> ordr = TradeCloseRequest(units=10000)
>>> print(json.dumps(ordr.data, indent=4))
{
   "units": "10000"
}
>>> # now we have the order specification, create the order request
>>> r = trades.TradeClose(accountID, tradeID=1234,
>>>                       data=ordr.data)
>>> # perform the request
>>> rv = client.request(r)
>>> print(rv)
>>> ...
```

6.3.9 TrailingStopLossOrderRequest

class oandapyV20.contrib.requests.**TrailingStopLossOrderRequest**(*tradeID*, *distance*, *clientTradeID=None*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*)

Bases: oandapyV20.contrib.requests.baserequest.BaseRequest

create a TrailingStopLossOrderRequest.

TrailingStopLossOrderRequest is used to build the body for a TrailingStopLossOrder. The body can be used to pass to the OrderCreate endpoint.

__init__(*tradeID*, *distance*, *clientTradeID=None*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*)

Instantiate a TrailingStopLossOrderRequest.

Parameters

- **tradeID** (*string (required)*) – the tradeID of an existing trade
- **distance** (*float (required)*) – the price distance

Example

```
>>> import json
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.orders as orders
>>> from oandapyV20.contrib.requests import TrailingStopLossOrderRequest
>>>
>>> accountID = "..."
>>> client = API(access_token=...)
>>> ordr = TrailingStopLossOrderRequest(tradeID="1234", distance=20)
>>> print(json.dumps(ordr.data, indent=4))
{
    "order": {
        "type": "TRAILING_STOP_LOSS",
        "tradeID": "1234",
        "timeInForce": "GTC",
        "distance": "20.00000"
    }
}
>>> # now we have the order specification, create the order request
>>> r = orders.OrderCreate(accountID, data=ordr.data)
>>> # perform the request
>>> rv = client.request(r)
>>> print(json.dumps(rv, indent=4))
>>> ...
```

data

data property.

return the JSON body.

6.4 support classes

The `oandapyV20.contrib.requests` module contains several classes that can be used optionally when creating Order Requests.

When creating an order to create a position, it is possible to create dependant orders that will be triggered when the position gets filled. This goes typically for *Take Profit* and *Stop Loss*.

These order specifications and additional data that goes with these order specifications can be created by the contrib.requests.*Order* classes and the contrib.requests.*Details classes.

6.4.1 Client Extensions

Client extensions can be used optionally on Order Requests. It allows a client to set a custom ID, Tag and/or Comment.

class `oandapyV20.contrib.requests.`**`ClientExtensions`**(*clientID=None*, *clientTag=None*, *clientComment=None*)

Bases: `oandapyV20.contrib.requests.baserequest.BaseRequest`

Representation of the ClientExtensions.

`__init__`(*clientID=None*, *clientTag=None*, *clientComment=None*)

Instantiate ClientExtensions.

Parameters

- **clientID** (*clientID (required)*) – the clientID
- **clientTag** (*clientTag (required)*) – the clientTag
- **clientComment** (*clientComment (required)*) – the clientComment

Example

```
>>> import json
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.orders as orders
>>> from oandapyV20.contrib.requests import (
...     MarketOrderRequest, TakeProfitDetails, ClientExtensions)
>>>
>>> accountID = "..."
>>> client = API(access_token=...)
>>> # at time of writing EUR_USD = 1.0740
>>> # let us take profit at 1.10, GoodTillCancel (default)
>>> # add clientExtensions to it also
>>> takeProfitOnFillOrder = TakeProfitDetails(
...     price=1.10,
...     clientExtensions=ClientExtensions(clientTag="mytag").data)
>>> print(takeProfitOnFillOrder.data)
{
    'timeInForce': 'GTC',
    'price": '1.10000',
    'clientExtensions': {'tag': 'mytag'}
}
>>> ordr = MarketOrderRequest(
...     instrument="EUR_USD",
```

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```
...     units=10000,
...     takeProfitOnFill=takeProfitOnFillOrder.data
... )
>>> # or as shortcut ...
>>> #   takeProfitOnFill=TakeProfitDetails(price=1.10).data
>>> print(json.dumps(ordr.data, indent=4))
>>> r = orders.OrderCreate(accountID, data=ordr.data)
>>> rv = client.request(r)
>>> ...
```

6.4.2 StopLossDetails

class oandapyV20.contrib.requests.**StopLossDetails**(*price*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*)

Bases: `oandapyV20.contrib.requests.onfill.OnFill`

Representation of the specification for a StopLossOrder.

It is typically used to specify 'stop loss details' for the 'stopLossOnFill' parameter of an OrderRequest. This way one can create the Stop Loss Order as a dependency when an order gets filled.

The other way to create a StopLossOrder is to create it afterwards on an existing trade. In that case you use StopLossOrderRequest on the trade.

__init__(*price*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*)

Instantiate StopLossDetails.

Parameters

- **price** (*float or string (required)*) – the price to trigger take profit order
- **timeInForce** (*TimeInForce (required), default TimeInForce.GTC*) – the time in force
- **gtdTime** (*DateTime (optional)*) – gtdTime is required in case timeInForce == TimeInForce.GTD
- **clientExtensions** (*ClientExtensions (optional)*) –

Example

```
>>> import json
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.orders as orders
>>> from oandapyV20.contrib.requests import (
>>>     MarketOrderRequest, StopLossDetails)
>>>
>>> accountID = "..."
>>> client = API(access_token=...)
>>> # at time of writing EUR_USD = 1.0740
>>> # let us take profit at 1.10, GoodTillCancel (default)
>>> stopLossOnFill = StopLossDetails(price=1.06)
>>> print(stopLossOnFill)
{
    "timeInForce": "GTC",
```

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```
    "price": "1.10000"
}
>>> ordr = MarketOrderRequest(
>>>     instrument="EUR_USD",
>>>     units=10000,
>>>     stopLossOnFill=stopLossOnFill.data
>>> )
>>> # or as shortcut ...
>>> #   stopLossOnFill=StopLossDetails(price=1.06).data
>>> print(json.dumps(ordr.data, indent=4))
>>> r = orders.OrderCreate(accountID, data=ordr.data)
>>> rv = client.request(r)
>>> ...
```

6.4.3 TakeProfitDetails

class `oandapyV20.contrib.requests.`**`TakeProfitDetails`**(*price*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*)

Bases: `oandapyV20.contrib.requests.onfill.OnFill`

Representation of the specification for a TakeProfitOrder.

It is typically used to specify 'take profit details' for the 'takeProfitOnFill' parameter of an OrderRequest. This way one can create the Take Profit Order as a dependency when an order gets filled.

The other way to create a TakeProfitOrder is to create it afterwards on an existing trade. In that case you use TakeProfitOrderRequest on the trade.

`__init__`(*price*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*)

Instantiate TakeProfitDetails.

Parameters

- **price** (*float or string (required)*) – the price to trigger take profit order
- **timeInForce** (*TimeInForce (required), default TimeInForce.GTC*) – the time in force
- **gtdTime** (*DateTime (optional)*) – gtdTime is required in case timeInForce == TimeInForce.GTD

Example

```
>>> import json
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.orders as orders
>>> from oandapyV20.contrib.requests import (
>>>     MarketOrderRequest, TakeProfitDetails)
>>>
>>> accountID = "..."
>>> client = API(access_token=...)
>>> # at time of writing EUR_USD = 1.0740
>>> # let us take profit at 1.10, GoodTillCancel (default)
>>> takeProfitOnFillOrder = TakeProfitDetails(price=1.10)
>>> print(takeProfitOnFillOrder.data)
```

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```
{
    "timeInForce": "GTC",
    "price": "1.10000"
}
>>> ordr = MarketOrderRequest(
>>>     instrument="EUR_USD",
>>>     units=10000,
>>>     takeProfitOnFill=takeProfitOnFillOrder.data
>>> )
>>> # or as shortcut ...
>>> #   takeProfitOnFill=TakeProfitDetails(price=1.10).data
>>> print(json.dumps(ordr.data, indent=4))
{
    "order": {
        "timeInForce": "FOK",
        "instrument": "EUR_USD",
        "units": "10000",
        "positionFill": "DEFAULT",
        "type": "MARKET",
        "takeProfitOnFill": {
            "timeInForce": "GTC",
            "price": "1.10000"
        }
    }
}
>>> r = orders.OrderCreate(accountID, data=ordr.data)
>>> rv = client.request(r)
>>> ...
```

6.4.4 TrailingStopLossDetails

class `oandapyV20.contrib.requests.`**`TrailingStopLossDetails`**(*distance*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*)

Bases: `oandapyV20.contrib.requests.onfill.OnFill`

Representation of the specification for a TrailingStopLossOrder.

It is typically used to specify 'trailing stop loss details' for the 'trailingStopLossOnFill' parameter of an OrderRequest. This way one can create the Trailing Stop Loss Order as a dependency when an order gets filled.

The other way to create a TrailingStopLossOrder is to create it afterwards on an existing trade. In that case you use TrailingStopLossOrderRequest on the trade.

`__init__`(*distance*, *timeInForce='GTC'*, *gtdTime=None*, *clientExtensions=None*)

Instantiate TrailingStopLossDetails.

Parameters

- **distance** (*float or string (required)*) – the price to trigger trailing stop loss order
- **timeInForce** (TimeInForce *(required), default TimeInForce.GTC*) – the time in force
- **gtdTime** (DateTime *(optional)*) – gtdTime is required in case timeInForce == TimeInForce.GTD

- **clientExtensions** (ClientExtensions *(optional)*) –

Example

```
>>> import json
>>> from oandapyV20 import API
>>> import oandapyV20.endpoints.orders as orders
>>> from oandapyV20.contrib.requests import (
>>>     MarketOrderRequest, TrailingStopLossDetails)
>>>
>>> accountID = "..."
>>> client = API(access_token=...)
>>> # at time of writing EUR_USD = 1.0740
>>> # add a trailing stoploss, at 50 pips GoodTillCancel (default)
>>> sld = 1.0740 - 1.0690
>>> trailingStopLossOnFill = TrailingStopLossDetails(distance=sld)
>>> print(trailingStopLossOnFill)
{
    "timeInForce": "GTC",
    "distance": "0.00500"
}
>>> ordr = MarketOrderRequest(
>>>     instrument="EUR_USD",
>>>     units=10000,
>>>     trailingStopLossOnFill=trailingStopLossOnFill.data
>>> )
>>> print(json.dumps(ordr.data, indent=4))
>>> r = orders.OrderCreate(accountID, data=ordr.data)
>>> rv = client.request(r)
>>> ...
```

CHAPTER 7

Examples

Examples can be found in the examples repositiory on github: examplesrepo.

7.1 Example for trades-endpoints

Take the script below and name it 'trades.py'. From the shell:

```
hootnot@dev:~/test$ python trades.py list
hootnot@dev:~/test$ python trades.py open
hootnot@dev:~/test$ python trades.py details <id1> [<id2> ...]
hootnot@dev:~/test$ python trades.py close <id1> <numunits> [<id2> <numunits>...]
hootnot@dev:~/test$ python trades.py clext <id1> [<id2> ...]
hootnot@dev:~/test$ python trades.py crc_do <id1> <takeprofit> <stoploss> [<id2> ...]
```

```
# use of the Trades{..} classes
import json
import requests
from oandapyV20 import API


import oandapyV20.endpoints.trades as trades
import sys

access_token = "xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx-yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy"
accountID = "zzz-zzzz-zzzzz"

api = API(access_token=access_token)

if chc == 'list':
   r = trades.TradesList(accountID)
   rv = api.request(r)
   print("RESP:\n{} ".format(json.dumps(rv, indent=2)))
```

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```
if chc == 'open':
    r = trades.OpenTrades(accountID)
    rv = api.request(r)
    print("RESP:\n{} ".format(json.dumps(rv, indent=2)))
    tradeIDs = [o["id"] for o in rv["trades"]]
    print("TRADE IDS: {}".format(tradeIDs))

if chc == 'details':
    for O in sys.argv[2:]:
        r = trades.TradeDetails(accountID, tradeID=O)
        rv = api.request(r)
        print("RESP:\n{} ".format(json.dumps(rv, indent=2)))

if chc == 'close':
    X = iter(sys.argv[2:])
    for O in X:
        cfg = { "units": X.next() }
        r = trades.TradeClose(accountID, tradeID=O, data=cfg)
        rv = api.request(r)
        print("RESP:\n{} ".format(json.dumps(rv, indent=2)))

if chc == 'cltext':
    for O in sys.argv[2:]:  # tradeIDs
        cfg = { "clientExtensions": {
                "id": "myID{}".format(O),
                "comment": "myComment",
             }
          }
        r = trades.TradeClientExtensions(accountID, tradeID=O, data=cfg)
        rv = api.request(r)
        print("RESP:\n{} ".format(json.dumps(rv, indent=2)))

if chc == 'crc_do':
    X = iter(sys.argv[2:])
    for O in X:
        cfg = {
                "takeProfit": {
                  "timeInForce": "GTC",
                  "price": X.next(),
                },
                "stopLoss": {
                  "timeInForce": "GTC",
                  "price": X.next()
                }
          }
        r = trades.TradeCRCDO(accountID, tradeID=O, data=cfg)
        rv = api.request(r)
        print("RESP:\n{} ".format(json.dumps(rv, indent=2)))
```

CHAPTER 8

Indices and tables

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