Package 'rPublic'

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Author Jason Guevara [aut, cre]
Maintainer Jason Guevara <jason.guevara.yt@gmail.com></jason.guevara.yt@gmail.com>
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Description

Check & Auto-Renew Bearer Tokens (Internal)

Usage

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```
.rp_checkAccessToken(printMsg = FALSE, mins = 120)
```

Arguments

```
printMsg = (bool) Should outcome messages be printed out? defaults to FALSE mins = (int) The number of minutes that the bearer token will be valid for.
```

Value

Checks validity of Bearer Token & auto-updates if needed. Assigns the new tokens in 'rp' environment and 'rp_tokens.rds' file

```
## Not run:
    # For Internal Use Prior to Making API Requests
    .rp_checkAccessToken(printMsg=FALSE, mins=120)
## End(Not run)
```

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.rp_env

temporary working environment

Description

temporary working environment

Usage

```
.rp_env
```

Format

An object of class environment of length 0.

Value

An auto generated environment to store our tokens

Examples

```
## Not run:
    .rp_env <- new.env(parent = emptyenv())
## End(Not run)</pre>
```

```
.rp_make_multileg_payload
```

Build Multi-Leg Order Payload (Internal)

Description

```
Build Multi-Leg Order Payload (Internal)
```

```
.rp_make_multileg_payload(
  orderType,
  qty,
  orderId = NULL,
  leg_symbols,
  leg_types,
  leg_sides,
  leg_indicator,
  leg_ratios,
  lmtPrc = NULL,
```

```
tif,
  expTime = NULL
)
```

Arguments

```
orderType
                 = (string) The Type of order: 'MARKET', 'LIMIT', 'STOP', 'STOP_LIMIT'
                 = (string) leg_ratio multiple: ex. '2' multiples the leg_ratios by 2X
qty
                 = (string) The order ID
orderId
                 = (string) Symbols: ex. c("SPY250815C00631000", "SPY250815C00631000")
leg_symbols
                 = (string) Symbol types: ex. c("OPTION", "OPTION")
leg_types
                 = (string) The side for each leg: ex. c("BUY", "SELL")
leg_sides
leg_indicator
                 = (string) Indicates if this is BUY to OPEN/CLOSE ex. c("OPEN", "OPEN")
                 = (string) The number of contracts to BUY/SELL: ex. c('5','5')
leg_ratios
1mtPrc
                 = (string) The limit price. Used when orderType = LIMIT or orderType =
                 STOP LIMIT
tif
                 = (string) The time in for the order: 'DAY' or 'GTD"
expTime
                 = (string) The expiration date. Only used when timeInForce is GTD, cannot be
                 more than 90 days in the future
```

Value

Returns an appropriate payload list for a multiple-leg order

Examples

Description

Build Option Symbol (Internal)

```
.rp_make_opt_symbol(under_sym, exp, type, strike)
```

.rp_make_ord_payload

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Arguments

```
under_sym = (string) Underlying symbol for the option: ex. 'SPY'
exp = (string) The option expiration: ex. "2025-08-15"
type = (string) The option type: 'C' for Call & 'P' for Put
strike = (double/int) The option strike price: 631 or 631.00
```

Value

Returns a valid symbol string for the option contract of interest

Examples

```
## Not run:
    # Return the proper option symbol of interest: "TSLA250808C00325000"
    .rp_make_opt_symbol(under_sym="TSLA", exp="2025-08-08", type="C", strike=325)
## End(Not run)
```

Description

Build Single-Leg Order Payload (Internal)

```
.rp_make_ord_payload(
    ticker,
    symType,
    orderId = NULL,
    side = NULL,
    ordType = NULL,
    timeInForce = NULL,
    expirationTime = NULL,
    qty = NULL,
    amt = NULL,
    lmtPrc = NULL,
    stopPrc = NULL,
    openCloseIndicator = NULL)
```

Arguments

ticker = (string) Ticker symbol: ex. 'SPY' symType = (string) Symbol type: ex. 'EQUITY' orderId = (string) The order ID side = (string) The Order Side BUY/SELL. For Options also include the openCloseIndicator = (string) The Type of order: 'MARKET', 'LIMIT', 'STOP', 'STOP_LIMIT' ordType = (string) The time in for the order: 'DAY' or 'GTD" timeInForce expirationTime = (string) The expiration date. Only used when timeInForce is GTD, cannot be more than 90 days in the future = (string) The order quantity. Used when buying/selling whole shares and when qty selling fractional. Mutually exclusive with amount = (string) The order amount. Used when buying/selling shares for a specific amt notional value 1mtPrc = (string) The limit price. Used when orderType = LIMIT or orderType = STOP LIMIT = (string) The stop price. Used when orderType = STOP or orderType = STOP_LIMIT stopPrc openCloseIndicator

= (string) Used for options only. Indicates if this is BUY to OPEN/CLOSE

Value

Returns an appropriate payload list for a single-leg order

Examples

Description

Build Dynamic Payload For rp_getQuote (Internal)

```
.rp_make_qte_payload(symbols, types)
```

.rp_read_tokens 7

Arguments

```
symbols = (string) Equity/ETF/Option symbol(s)
types = (string) The product type (ex. 'EQUITY' or 'OPTION')
```

Value

Returns a list in the appropriate payload format in case the user needs multiple symbols for quotes

Examples

Description

Request token file (Internal)

Usage

```
.rp_read_tokens()
```

Value

Requests your token file 'rp_tokens.rds' from working directory & assigns a working environment if it exists

```
## Not run:
    # For Internal Use (assigns tokens inside of the 'rp' environment)
    .rp_read_tokens()
## End(Not run)
```

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rp_cancel_order

Cancel Order

Description

Cancel Order

Usage

```
rp_cancel_order(accountId, orderId)
```

Arguments

accountId = Public Brokerage Account Number

orderId = The order ID

Value

Request order cancellation & return as a data. frame.

Examples

rp_getAccHist

Get History

Description

Get History

```
rp_getAccHist(accountId, start = NULL, end = NULL, pageSize = NULL)
```

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Arguments

```
accountId = Public Brokerage Account Number

start = (Optional) Start timestamp in ISO 8601 format with timezone. Ex. "YYYY-MM-DDTHH:MM:SSZ"

end = (Optional) End timestamp in ISO 8601 format with timezone. Ex. "YYYY-MM-DDTHH:MM:SSZ"

pageSize = (Optional) Maximum number of records to return.
```

Value

Fetches a paginated data. frame of historical events for the specified account.

Examples

rp_getAccToken

Get New Access/Bearer Token From Secret Key

Description

Get New Access/Bearer Token From Secret Key

Usage

```
rp_getAccToken(exp_in_mins)
```

Arguments

```
exp_in_mins = (int) The number of minutes that the bearer token will be valid for.
```

Value

Update Bearer Token from secret key & returns working environment and saves updated tokens in 'rp_tokens.rds'

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Examples

```
## Not run:
    # Request New Bearer Token that expires in 120 minutes
    rp_getAccToken(exp_in_mins=120)
## End(Not run)
```

rp_getAccts

Get Public Account Info

Description

Get Public Account Info

Usage

```
rp_getAccts()
```

Value

Returns a data. frame for the user's Public Brokerage Account

Examples

```
## Not run:
    # Return Public Brokerage Account Information
    rp_getAccts()
## End(Not run)
```

rp_getAcctsPort

Get Account Portfolio V2

Description

Get Account Portfolio V2

Usage

```
rp_getAcctsPort(accountId)
```

Arguments

```
accountId = Public Brokerage Account Number
```

rp_getAllInstruments 11

Value

Returns a data. frame for the user's specific Public Brokerage Account

Examples

```
## Not run:
    # Return Public Brokerage Account Information
        my_acc <- rp_getAccts()
        my_port <- rp_getAcctsPort(accountId = my_acc$accountId)
## End(Not run)</pre>
```

```
rp_getAllInstruments Get All Instruments
```

Description

Get All Instruments

Usage

```
rp_getAllInstruments(
  typeFilter = NULL,
  tradingFilter = NULL,
  fractionalTradingFilter = NULL,
  optionTradingFilter = NULL,
  optionSpreadTradingFilter = NULL)
```

Arguments

```
typeFilter = (Optional) Ex. "BOND","EQUITY","CRYPTO","INDEX","ALT"
tradingFilter = (Optional) Ex. "BUY_AND_SELL","DISABLED","LIQUIDATION_ONLY"
fractionalTradingFilter = (Optional) Ex. "DISABLED","BUY_AND_SELL","LIQUIDATION_ONLY"
optionTradingFilter = (Optional) Ex. "DISABLED","BUY_AND_SELL","LIQUIDATION_ONLY"
optionSpreadTradingFilter = (Optional) Ex. "DISABLED","BUY_AND_SELL","LIQUIDATION_ONLY"
```

Value

Retrieves all available trading instruments with optional filtering capabilities as a data.frame.

rp_getInstrument

Examples

rp_getInstrument

Get Specific Instrument Information

Description

Get Specific Instrument Information

Usage

```
rp_getInstrument(symbol, type)
```

Arguments

Value

Retrieves specific trading instrument with optional filtering capabilities as a data. frame.

```
## Not run:
    # Fetches AAPL instrument trading information
        this_ins <- rp_getInstrument(symbol = "AAPL", type="EQUITY")
## End(Not run)</pre>
```

rp_getOptChains 13

ins		
-----	--	--

Description

Get Option Chains

Usage

```
rp_getOptChains(accountId, ticker, type, exp)
```

Arguments

accountId = Public Brokerage Account Number

ticker = Ticker symbol: Ex. "SPY"

type = Ticker Type: Ex. 'EQUITY','OPTION','MULTI_LEG_INSTRUMENT', 'CRYPTO',

'ALT','TREASURY', 'BOND', 'INDEX'

exp = Option Expiration Date: Ex. "2025-08-08"

Value

Retrieve option chains by symbol and return as a data. frame.

Examples

```
## Not run:
# Fetches Option Chains for Ticker Symbol
my_acc <- rp_getAccts()
rp_getOptChains(accountId = my_acc$accountId, ticker = 'SPY', type = "EQUITY", exp="2025-08-15")
## End(Not run)</pre>
```

rp_getOptExp Get Option Expiration Dates

Description

Get Option Expiration Dates

```
rp_getOptExp(accountId, ticker, type)
```

rp_getOrderId

Arguments

```
accountId = Public Brokerage Account Number
```

ticker = Ticker symbol: Ex. "SPY"

type = Ticker Type: Ex. 'EQUITY','OPTION','MULTI_LEG_INSTRUMENT', 'CRYPTO',

'ALT', 'TREASURY', 'BOND', 'INDEX'

Value

Retrieve option expiration dates for a specific ticker symbol as a data. frame.

Examples

```
## Not run:
# Fetches Option Expiry Dates Available
my_acc <- rp_getAccts()
rp_getOptExp(accountId = my_acc$accountId, ticker = "TSLA", type="EQUITY")
## End(Not run)</pre>
```

rp_getOrderId

Order ID

Description

Order ID

Usage

```
rp_getOrderId()
```

Value

An auto generated character string to use for placing orders

```
## Not run:
    rp_getOrderId()
## End(Not run)
```

rp_getQuote 15

Description

Get Trading Quotes

Usage

```
rp_getQuote(accountId, ticker, type)
```

Arguments

```
accountId = Public Brokerage Account Number
```

ticker = Ticker symbol: Ex. "SPY"

type = Ticker Type: Ex. 'EQUITY','OPTION','MULTI_LEG_INSTRUMENT', 'CRYPTO',

'ALT', 'TREASURY', 'BOND', 'INDEX'

Value

Retrieve real-time quotes as a data. frame.

Examples

rp_get_greeks

Get Option Greeks

Description

Get Option Greeks

```
rp_get_greeks(accountId, osiOptionSymbol)
```

rp_get_order

Arguments

Value

Request order cancellation & return as a data. frame.

Examples

rp_get_order

Get Order Details

Description

Get Order Details

Usage

```
rp_get_order(accountId, orderId)
```

Arguments

```
accountId = Public Brokerage Account Number
orderId = The order ID
```

Value

Retrieve order details & return as a data.frame.

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Examples

rp_order_multi

Multi-Leg Live Order

Description

Multi-Leg Live Order

Usage

```
rp_order_multi(
    accountId,
    orderType,
    orderId,
    qty,
    leg_symbols,
    leg_types,
    leg_sides,
    leg_indicator,
    leg_ratios,
    tif,
    mins = NULL,
    lmtPrc = NULL
)
```

Arguments

```
= Public Brokerage Account Number
accountId
orderType
                 = The Type of order: Ex. 'MARKET', 'LIMIT', 'STOP', 'STOP_LIMIT'
orderId
                 = The order ID: use rp_getOrderId()
                 = leg_ratio multiple: ex. '2' multiples the leg_ratios by 2X
qty
                 = Symbols: ex. c("SPY250815C00631000", "SPY250815C00631000")
leg_symbols
                 = Symbol types: ex. c("OPTION", "OPTION")
leg_types
leg_sides
                 = The side for each leg: ex. c("BUY", "SELL")
leg_indicator
                 = Indicates if this is BUY to OPEN/CLOSE ex. c("OPEN", "OPEN")
                 = The number of contracts to BUY/SELL: ex. c('5','5')
leg_ratios
tif
                 = The time in for the order: 'DAY' or 'GTD"
mins
                 = Minutes till order expires.
1mtPrc
                 = The limit price. Used when orderType = LIMIT or orderType = STOP_LIMIT
```

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Value

Place a new multi-leg order and returns order id as a data. frame.

```
## Not run:
# Fetches costs associated with the type of order being placed
my_acc <- rp_getAccts()</pre>
# open bull-call spread for 0.25 (buy 2, sell 2)
rp_order_multi(accountId = my_acc$accountId, orderType = "LIMIT", qty = 2,
               leg_symbols = c("SPY250815C00630000", "SPY250815C00632000"),
               leg_types = c("OPTION", "OPTION"), leg_sides = c("BUY", "SELL"),
               leg_indicator = c("OPEN", "OPEN"), leg_ratios = c(1, 1),
               tif = "DAY", lmtPrc = 0.25, orderId = rp_getOrderId())
# open long butterfly for 0.05
rp_order_multi(accountId = my_acc$accountId, orderType = "LIMIT", qty = 1,
                leg_symbols = c("SPY250815C00630000",
                                "SPY250815C00631000",
                                "SPY250815C00632000"),
                leg_types = c("OPTION", "OPTION", "OPTION"),
                leg_sides = c("BUY", "SELL", "BUY"),
                leg_indicator = c("OPEN","OPEN","OPEN"),
                leg_ratios = c(1, 2, 1), tif = "DAY", lmtPrc = 0.05,
                orderId = rp_getOrderId())
# open iron-condor
rp_order_multi(accountId = my_acc$accountId, orderType = "LIMIT", qty = 1,
                leg_symbols = c("SPY250815C00631000", "SPY250815C00630000",
                                "SPY250815C00625000", "SPY250815C00624000"),
                leg_types = c("OPTION", "OPTION", "OPTION","OPTION"),
                leg_sides = c("SELL", "BUY", "SELL", "BUY"),
                leg_indicator = c("OPEN","OPEN","OPEN","OPEN"),
                leg_ratios = c(1, 1, 1, 1), tif = "DAY", lmtPrc = 0.30,
                orderId = rp_getOrderId())
# covered call
 rp_order_multi(accountId = my_acc$accountId, orderType = "LIMIT", qty = 1,
                                leg_symbols = c("RIVN", "RIVN250815C00012000"),
                                leg_types = c("EQUITY", "OPTION"),
                                leg_sides = c("BUY", "SELL"),
                                leg_indicator = c("OPEN", "OPEN"),
                                leg_ratios = c(100, 1),
                                tif = "DAY", lmtPrc = 11.75,
                                orderId = rp_getOrderId())
## End(Not run)
```

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rp_order_single

Single-Leg Live Order

Description

Single-Leg Live Order

Usage

```
rp_order_single(
  accountId,
  ticker,
  symType,
  orderId,
  side = NULL,
  ordType = NULL,
  timeInForce = NULL,
  expirationTime = NULL,
  amt = NULL,
  lmtPrc = NULL,
  stopPrc = NULL,
  openCloseIndicator = NULL)
```

Arguments

accountId = Public Brokerage Account Number = Ticker symbol: Ex. "SPY" ticker = Ticker Type: Ex. 'EQUITY', 'OPTION', 'MULTI_LEG_INSTRUMENT', 'CRYPTO', symType 'ALT', 'TREASURY', 'BOND', 'INDEX' orderId = The order ID: use rp_getOrderId() = The Order Side BUY/SELL. For Options also include the openCloseIndicator. side Ex. 'BUY' OR 'SELL' ordType = The Type of order: Ex. 'MARKET', 'LIMIT', 'STOP', 'STOP_LIMIT' timeInForce = The time in for the order: Ex. 'DAY' OR 'GTD" expirationTime = The expiration date. Only used when timeInForce is GTD, cannot be more than 90 days in the future = The order quantity. Used when buying/selling whole shares and when selling qty fractional. Mutually exclusive with amount = The order amount. Used when buying/selling shares for a specific notional amt = The limit price. Used when orderType = LIMIT or orderType = STOP_LIMIT 1mtPrc stopPrc = The stop price. Used when orderType = STOP or orderType = STOP_LIMIT openCloseIndicator

= Used for options only. Indicates if this is BUY to OPEN/CLOSE

Value

Submit a live single-leg order and and returns the order ID as a data. frame.

Examples

rp_preOrder_multiLeg Preflight Multiple-Leg

Description

Preflight Multiple-Leg

```
rp_preOrder_multiLeg(
   accountId,
   orderType,
   qty,
   leg_symbols,
   leg_types,
   leg_sides,
   leg_indicator,
   leg_ratios,
   tif,
   mins = NULL,
   lmtPrc = NULL
)
```

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Arguments

```
accountId
                 = Public Brokerage Account Number
                 = The Type of order: Ex. 'MARKET', 'LIMIT', 'STOP', 'STOP LIMIT'
orderType
                 = leg ratio multiple: ex. '2' multiples the leg ratios by 2X
qty
                 = Symbols: ex. c("SPY250815C00631000", "SPY250815C00631000")
leg_symbols
                 = Symbol types: ex. c("OPTION", "OPTION")
leg_types
leg_sides
                 = The side for each leg: ex. c("BUY", "SELL")
                 = Indicates if this is BUY to OPEN/CLOSE ex. c("OPEN", "OPEN")
leg_indicator
                 = The number of contracts to BUY/SELL: ex. c('5','5')
leg_ratios
tif
                 = The time in for the order: 'DAY' or 'GTD"
                 = Minutes till order expires.
mins
1mtPrc
                 = The limit price. Used when orderType = LIMIT or orderType = STOP_LIMIT
```

Value

Calculates the estimated financial impact of a complex multi-leg trade before execution and returns as a data. frame.

```
## Not run:
# Fetches costs associated with the type of order being placed
my_acc <- rp_getAccts()</pre>
# open bull-call spread for 0.25 (buy 2, sell 2)
rp_preOrder_multiLeg(accountId = my_acc$accountId, orderType = "LIMIT", qty = 2,
                      leg_symbols = c("SPY250815C00630000", "SPY250815C00632000"),
                      leg_types = c("OPTION", "OPTION"), leg_sides = c("BUY", "SELL"),
                      leg_indicator = c("OPEN", "OPEN"), leg_ratios = c(1, 1),
                      tif = "DAY", lmtPrc = 0.25)
# open long butterfly for 0.05
rp_preOrder_multiLeg(accountId = my_acc$accountId, orderType = "LIMIT", qty = 1,
                      leg_symbols = c("SPY250815C00630000",
                                      "SPY250815C00631000",
                                      "SPY250815C00632000"),
                      leg_types = c("OPTION", "OPTION", "OPTION"),
                      leg_sides = c("BUY", "SELL", "BUY"),
                      leg_indicator = c("OPEN","OPEN","OPEN"),
                      leg_ratios = c(1, 2, 1), tif = "DAY", lmtPrc = 0.05)
# open iron-condor
rp_preOrder_multiLeg(accountId = my_acc$accountId, orderType = "LIMIT", qty = 1,
                      leg_symbols = c("SPY250815C00631000", "SPY250815C00630000",
                                      "SPY250815C00625000", "SPY250815C00624000"),
                      leg_types = c("OPTION", "OPTION", "OPTION", "OPTION"),
                      leg_sides = c("SELL","BUY","SELL","BUY"),
                      leg_indicator = c("OPEN", "OPEN", "OPEN", "OPEN"),
```

```
leg\_ratios = c(1, 1, 1, 1), \; tif = "DAY", \; lmtPrc = 0.30) \\ ## \; End(Not \; run)
```

Description

Preflight Single-Leg

Usage

```
rp_preOrder_singleLeg(
   accountId,
   ticker,
   symType,
   side = NULL,
   ordType = NULL,
   timeInForce = NULL,
   expirationTime = NULL,
   qty = NULL,
   amt = NULL,
   lmtPrc = NULL,
   stopPrc = NULL,
   openCloseIndicator = NULL)
```

Arguments

accountId = Public Brokerage Account Number

ticker = Ticker symbol: Ex. "SPY"

symType = Ticker Type: Ex. 'EQUITY','OPTION','MULTI_LEG_INSTRUMENT', 'CRYPTO',

'ALT', 'TREASURY', 'BOND', 'INDEX'

side = The Order Side BUY/SELL. For Options also include the openCloseIndicator.

Ex. 'BUY' OR 'SELL'

ordType = The Type of order: Ex. 'MARKET', 'LIMIT', 'STOP', 'STOP_LIMIT'

timeInForce = The time in for the order: Ex. 'DAY' OR 'GTD"

expirationTime = The expiration date. Only used when timeInForce is GTD, cannot be more

than 90 days in the future

qty = The order quantity. Used when buying/selling whole shares and when selling

fractional. Mutually exclusive with amount

amt = The order amount. Used when buying/selling shares for a specific notional

value

1mtPrc = The limit price. Used when orderType = LIMIT or orderType = STOP_LIMIT

```
stopPrc = The stop price. Used when orderType = STOP or orderType = STOP_LIMIT openCloseIndicator = Used for options only. Indicates if this is BUY to OPEN/CLOSE
```

Value

Calculates the estimated financial impact of a potential trade before execution and returns as a data.frame.

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