Success Trade Securities
Trading API
Version 3.0
Last Update: Aug 1, 2012

The api described in this documentation is provided for the express use of clients of Success Trade Securities and its subsidiary brokerage sites. Contents are subject to change without notice. If you are using this API, be advised that you are using it entirely at your own risk.

Please register with Success Trade Securities in order to receive updates of this document.

Table of Contents

Introduction

This document presents a reference for connecting to and sending trades to the Success Trade Securities API server. This server services individual clients who already have funded accounts with any of Success Trade subsidiary brokerage firms (Success Trade, Lowtrades, or Just2Trade).
The audience for this document are customers who have a knowledge of computer programming and wish to create their own trading interface. The api provides these customers a venue through which to execute the trades. A knowledge of programming with TCP/IP sockets is assumed.

Note that there are no quote services provided through this api. There are many real time quote service providers, for your convenience we list several here. **Success Trade is not affiliated with any of these providers and this is not an endorsement or recommendation for their use.**

PCQuote	www.pcquote.com
eSignal	www.esignal.com
QuoteStream	www.quotestream.com
MorningStar	www.morningstar.com

The Success Trade API is based on a subset of the FIX messaging protocol. Additional tags have been defined to accommodate trading within the Success Trade environment. A full explanation of the FIX protocol can be found at www.fixprotocol.org.
NOTE: This API is only a subset of the FIX protocol. 3rd party FIX processing engines are not supported, since the SuccessTrade API does not require nor support administrative messages, some message tags and the normal required headers of the FIX protocol.

Getting Support

Support is available via email only at apisupport@just2trade.com. We attempt to provide 24 hour turnaround on email support requests.
Please make your questions as specific as possible when emailing for support. This will allow us to answer your questions in the shortest possible timeframe.

Always include your test account username and account number in ALL correspondence so that we may quickly find your messages in the logs to help you with any issues.

Program Testing

To arrange for an account for testing your programs, please contact Success Trade. Note that all ip addresses of the test servers are subject to change without notice. If you are having trouble connecting to the test server, please contact support via email.

Note that we can not provide programming instruction. However, if you require assistance, feel free to ask any questions or send us code snippets to review.

Description of a Typical Trading Session

In a typical trading session, the flow of information is as follows:

1. Client connects to authentication server. This server verifies that the client is allowed to use the api and is a valid account holder. If both conditions are met, the server sends back an authentication confirmation, including a session key and further information about the ip and port to connect to the actual trade server.
2. Client logs in to the trade server at the ip and port returned in (1) . At login, the trade server will respond with information about the client's account, including current positions and buying power as well as currently open orders. Also returned will be a summary of completed trades (both executed and cancelled) for the current day.
3. While logged in, the client sends order or order cancellation requests to the server. All message requests must be accompanied by the session key provided to the client in (1) The server sends back order or cancel confirmations, or execution or cancellation reports to the client. Order execution or cancellation reports are accompanied by update messages that update the client's buying power and positions held.
4. Client disconnects when finished trading.

Important Notes:

Orders remain open if the client disconnects. All orders must be cancelled by specific cancellation request messages sent to the server, except day orders, which of course will expire at the end of the day's trading.

Only one login per client to the API is allowed. Multiple logins by the same client are not permitted.

If your program disconnects from the trading server at any time, you will be required to obtain a new server key by re-authenticating with the authentication server.

Message Format

The general format of messages between client and server consists of a series of tag-value sets in the following format:

<SOH>tag=value

Where <SOH> is the start of header character (0x01)

The end of message is denoted by the <EOT> character (0x04)

Thus, a full message is formatted as follows:

<SOH>tag=value<SOH>tag=value….<SOH>tag=value<SOH>tag=value<EOT>

The tags which are to be used depend on the particular message being sent. Appendix 1 presents a list of all tags supported by the API.

Messages are not encrypted.

Definitions of special characters used in the API

<SOH> char 0x01 start of header

<EOT> char 0x04 end of transmission

Also note that the tags do not come in any specific order. Your program must handle message tags in ANY order.

Connecting To The Authentication Server

Authentication Version 1

Note: This method is no longer supported and should not be used.

A test server is located at ip address : 216.246.65.7
Port: 23005
Note: This authentication method will be discontinued as of August 30, 2012. Users are strongly advised to develop applications using the secure authentication method.

Client Request

To connect to the API, the client first sends a connection request to the authentication server. The message should be formatted as follows:
<SOH>35=A<SOH>50=***loginid***<SOH>96=***password***<SOH>76=***brokerageid***<EOT>
Where loginid and password are the login id and password used to log in to your trading account.
Brokerageid is a 4 letter code identifying the firm your trading account is held with. See Appendix 1 for possible values.

Server Response

On a successful login, the server will respond with:
<SOH>35=A<SOH>926=***status***<SOH>11999=***serverkey***<SOH>12000=***trade server ip***<SOH>12001=***trade server port***<EOT>

Tag 926 indicates status of the login attempt. See Appendix 1 for possible values.

Secure Authentication

A new version of the authentication is now available which allows for secure authentication for logging in to the API. This authentication is provided as a web service accessed through our secure server.

Client Request

Client makes a request to the secure server as a web service call as follows:

Test Server
http://apitest.bptrade.net/cgi-bin/serviceAPIAuthenticator.cgi?user=username&device=API&password=pw

For Just2Trade clients
https://trading.just2trade.com/cgi-bin/serviceAPIAuthenticator.cgi?user=username&device=API&password=pw

For Lowtrades clients
https://trading.lowtrades.com/cgi-bin/serviceAPIAuthenticator.cgi?user=username&device=API&password=pw

Where username and password are the login credentials you use to login to the trading site via the web. In the case of the development / test server, this is the username and password supplied to you when you requested the development/test account for API access.

Server Response

The server will respond with xml formatted output on successful authentication:

```
<api-authentication>
<user>username</user>
<device>API</device>
<TradeServerIP>75.102.12.197</TradeServerIP>
<TradeServerPort>23000</TradeServerPort>
<SessionKey>ABXP25794</SessionKey>
<Status>1</Status>
</api-authentication>
```

If your login is unsuccessful, the server will respond as follows:

```
<api-authentication>
<Status>0</Status>
<user>username</user>
<device>API</device>
</api-authentication>
```

The status of 0 indicates that you are not permissioned to use the api or your login attempt has failed. Email apisupport@just2trade.com for assistance or if you require further explanation.

Connecting to The Trade Server

Once the client is validated on the authentication server, it may now connect to the actual trade server. Note that if you disconnect at any time during your session, you will need to re-login through the authentication server to get a new server key. In the client request, tag 76 should be set as follows:

Test API   76=TSTA
Just2Trade 76=STJT
Lowtrades 76=STSS

Client Request

<SOH>35=A<SOH>11999=***serverkey***<SOH>50=***loginid***<SOH>76=***brokerageid***<EOT>

Server Response

On success the server will respond as follows:
First, a login confirmation will be sent as follows:
<SOH>35=A<SOH>926=1<SOH>58=LOGIN SUCCESS<EOT>
The server will then send a list of trading destinations that are available to this client:
<SOH>35=dr<SOH>13000=**ISLD;ARCA;DEFAULT;DOMS;**<EOT>
Next the server will send balance and position information for all accounts held by that client. The account balance information (one for each account) message will be sent back as follows:
<SOH>35=br<SOH>1=***account***<SOH>13002=***cashtradebalance***<SOH>13003=***margintradebalance***<EOT>
One position report message will be sent back for each position held by the user.

<SOH>35=yr<SOH>1=***account***<SOH>55=***symbol***<SOH>38=***quantity***<SOH>31=***price***<SOH>167=***securitytype***<SOH>13001=***accounttype***<EOT>

Finally, the server will send a summary of all completed trades for the current day, as well as all open orders for all accounts held by the client. Note that the trade summaries only show aggregated totals for positions bought and sold and prices. That is, if an order was executed in more than one fill, only the total quantity executed and average price of all executions will be shown.

Example:

Client requested one trade, a buy of 100 shares of DELL. The trade was executed and the 100 shares were filled at a price of 10.49 each.

<SOH>35=8<SOH>1=77777777<SOH>11=AABF8494<SOH>38=100<SOH>31=10.49<SOH>39=2<SOH>14=100<SOH>13001=1<SOH>55=DELL<SOH>60=2007-01-15 12:22:06<SOH>40=2<SOH>44=10.49<SOH>54=1<SOH>59=1<EOT>

Explanation of fields:

35=8 message type is execution report
1=77777777 account
11=AABF8494 sequence code of order
38=100 original quantity requested
31=10.49 average fill price
39=2 status of order
14=100 total number of shares executed for this order
13001=1 account type
55=DELL stock symbol
60=2007-01-15 12:22:06 time of execution. In the case of multiple fills, this field shows the last(most recent) fill
40=2 order type was a limit
44=price limit price specified by the client
54=1 side of order
59=1 time in force for order

The client is now fully logged in and able to send additional requests to the server.

Messages Between The Client And Trade Server

Heartbeat

Client Sends:

<SOH>35=0<SOH>11999=***serverkey***<SOH>50=***username***<EOT>

Server Response:

<SOH>35=0<SOH>11999=***serverkey***<SOH>50=***username***<SOH>52=2008-08-05 13:17:14<EOT>

New Order Request

Client Sends:

<SOH>35=D<SOH>11999=***serverkey***<SOH>1=***account***<SOH>76=***brokercode***<SOH>55=***symbol***<SOH>44=***limitprice***<SOH>54=***side***<SOH>38=***qty***<SOH>40=***ordertype***<SOH>59=***tif***<SOH>13001=***accounttype***<SOH>99=***stopprice***<SOH>100=destination<EOT>
Note :
Field 99 is only required for a stop or stop-limit order
Example:
<SOH>35=D<SOH>11999=***serverkey***<SOH>1=***account***<SOH>76=STSS<SOH>55= ***symbol***<SOH>40=2<SOH>44=10.49<SOH>54=1<SOH>38=100<SOH>59=0<SOH>100=DEFAULT<SOH>13001=1<EOT>

Server Response
Case 1: Order is rejected
<SOH>35=8<SOH>1=***account***<SOH>11=***orderid***<SOH>44=0<SOH>40=1<SOH>54=1<SOH>55=***symbol***<SOH>167=1<SOH>59=0<SOH>38=***quantity***<SOH>100=***destination***<SOH>39=8<SOH>60=2011-12-27 15:01:00<SOH>13001=***accounttype***<SOH>58=Order rejected – reject reason text <EOT>

Case 2: Order is accepted
The response will be a new order acknowledgement, then an open order message. Outside of market hours, only the new order acknowledgement will be returned.
New order ack:

<SOH>35=8<SOH>1=***account***<SOH>11=ABLF1174<SOH>44=0<SOH>40=1<SOH>54=1<SOH>55=DELL<SOH>167=1<SOH>59=0<SOH>38=100<SOH>100=DEFAULT<SOH>39=A<SOH>60=2011-12-27 15:08:27<SOH>13001=2<EOT>

Open order:

<SOH>35=8<SOH>1=***account***<SOH>11=ABLF1174<SOH>44=0<SOH>40=1<SOH>54=1<SOH>55=DELL<SOH>167=1<SOH>59=0<SOH>38=100<SOH>100=BPTRADE<SOH>39=0<SOH>60=2011-12-27 15:08:27<SOH>13001=2<EOT>

Case 3: Order is executed

<SOH>35=8<SOH>1=***account***<SOH>11=***orderid***<SOH>44=0<SOH>55=***symbol***<SOH>59=0<SOH>40=1<SOH>54=1<SOH>38=100<SOH>100=***destination***<SOH>32=100<SOH>31=14.95<SOH>60=2011-12-27 15:08:28<SOH>14=100<SOH>12=2.5<SOH>39=2<EOT>

On execution you will also get a position update report reflecting the updated quantity of the symbol that was executed.

Cancel Order Request

Client Request:

<SOH>35=F<SOH>41=***orderid***<SOH>11999=***serverkey***<SOH>1=***account***<SOH>76=***broker***<EOT>
Note: tag 41 contains the unique order identifier assigned by the API server. This instruction will be a request to cancel all remaining unfilled shares of the order. There is no support for partial cancels.

You should not attempt (and it is not necessary) to send cancellation requests for day or day+extended hours orders after the market session has closed. The system will automatically expire these orders.

Server Response:
If the request is successful, two messages will be generated, a pending cancel and a cancelled. Check tag 39 for the status of the order. Outside market hours, only a single message is generated with tag 39=4. For example, outside market hours, the following message is generated.

<SOH>35=8<SOH>1=***account***<SOH>11=***orderid***<SOH>44=0<SOH>40=1<SOH>54=1<SOH>55=***symbol***<SOH>167=1<SOH>59=0<SOH>38=100<SOH>100=DEFAULT<SOH>60=2011-12-27 16:52:48<SOH>39=4<EOT>

Position Update Request

Client Request:
<SOH>35=AN<SOH>11999=***serverkey***<SOH>50=***username***<SOH>76=***broker***<EOT>

Server Response:
one report for each position held, example:
<SOH>35=yr<SOH>50=***username***<SOH>1=***account***<SOH>55=***symbol***<SOH>38=***quantity***<SOH>31=0<SOH>167=1<SOH>13001=2<EOT>

Note: position update requests may be made at a maximum of once every every 30 seconds. More frequent requests will be ignored by the server. Excessive requests will cause your connection to be dropped.

Balance Update Request

Client Request:
<SOH>35=AX<SOH>11999=***serverkey***<SOH>50=***username***<SOH>76=***broker***<EOT>

Server Response:
<SOH>35=br<SOH>50=***username***<SOH>1=***account***<SOH>13001=2<SOH>13002=-73378.98<SOH>13003=83786.92<SOH>13005=50175<EOT>

Note: balance updates may be made no closer than 40 seconds apart. More frequent requests will be ignored by the server. Excessive requests will cause your connection to be dropped.

Shortlist Request

Client Request:
<SOH>35=x<SOH>11999=***serverkey***<SOH>50=***username***<SOH>76=***brokerid***<EOT>

Server Response:
One message for each available symbol available for shorting. Each message appears as follows:
<SOH>35=x<SOH>55=***symbol***<SOH>38=5000<EOT>

Trade Update Request

Client Request:
<SOH>35=AQ<SOH>11999=***serverkey***<SOH>50=***username***<SOH>76=***broker***<EOT>

Server Response:
Server responds with details of all executed trades, one record per fill. Example:
<SOH>35=8<SOH>50=***username***<SOH>1=***account***<SOH>11=***orderid***<SOH>44=0<SOH>40=1<SOH>54=1<SOH>55=***symbol***<SOH>167=1<SOH>59=0<SOH>38=100<SOH>100=***destination***<SOH>39=2<SOH>13001=2<SOH>31=14.95<SOH>14=100<SOH>60=2011-12-27 15:08:28<SOH>12=2.5<EOT>

Note: trade update requests may be made at a maximum of once every every 30 seconds. More frequent requests will be ignored by the server. Excessive requests will cause your connection to be dropped.

Test Server Rules of Engagement

In order to allow testing of various scenarios of trading, the test server will respond in different ways depending on the order quantity and type of order requested. The following table outlines the rules of engagement for the test server.

1) the test execution server operates during the same hours as the real market. Orders will not be executed after hours or on weekends.
2) market orders: are executed at the current market price. If you enter a market order with a qty of 3600 shares, it will be filled in several partial fills with prices varying by a few cents on either side of the current market price of the symbol.
3) limit orders:
    if qty < 700 , order will be filled at the price requested
    if qty = 750,   500 filled and 250 left open
    if qty = 1200 partial fills will total 1000 shares, the remaining 200 left open
    if qty = 900   fully filled in 3 partial fills
  all other quantities will remain as open orders
4) stop or stop limit orders
   if qty <= 700 shares, filled at the requested stop price immediately
   all other orders remain open
5) this is strictly a test server. The account balances and trade executions are fictitious.

Appendix 1 - Tag Reference

The following table lists all tags supported by the API. The use of each tag is described in the appropriate section earlier in the document. Also refer to the appropriate section to determine if the tag is mandatory in the message being sent. Tags not listed that appear in messages should be considered for internal use and ignored by the client applications.

Tag	Description	Possible Values
1	User account number	
11	Order id. Always in the form AAAANNNN	
12	Commission	
14	Total quantity of shares executed on the order	
31	Price of last fill. Note in a position update message, this field will be the average price paid for all holdings in this security. At login, this will indicate the average price paid for the number of shares executed so far	
32	Quantity filled in most recent fill	

35	Message type	To Server:
		A = logon request
		D = new order request
		F = order cancel request
		0 = heartbeat
		x = shortlist request
		AN = position update request
		AX = balance update request
		AQ = trade update request
		
		From server:
		A = logon response
		0 = heartbeat
		3 = order reject
		8 = Execution Report
		9 = Order Cancel Reject
		dr = trading destinations report
		yr = position report
		br = account report
		x = shortlist entry

38	Order quantity	Must be greater than 0
39	Order status	A = pending new 0 = open 1 = partially filled 2 = filled 4 = cancelled 6 = pending cancel 8 = order rejected
40	Order type	1 = market 2 = limit 3 = stop 4 = stop-limit 6 = market on close
41	Reference order id. Used to refer to a particular order id to request a cancel	
44	Limit price	
50	Username. This is the same username that you use to log in to your web trading account.	
54	Side of order	1 = buy 2 = sell 5 = sell short BC = buy to cover
55	symbol	
58	Free form text field	
59	Time in force	0 = Good for Day 1 = Good til Cancel 5 = Day+Extended Hours
60	Transaction time. Always in the form: yyyy-mm-dd hh:mm:ss (time is Eastern time)	
76	Broker id	STSS (for Lowtrades) STJT (for Just2Trade) TEST (for test server)
96	User supplied data.	Depends on message type
99	Stop price	Only required for stop or stop-limit order requests
100	Destination for order	Valid value is any one of the destinations returned at login in tag 13000
167	Security type	1 = equity (stock) 2 = equity option
926	User status	1 = logged in

		2 = not logged in 3 = no such user 4 = incorrect password
11999	Server id key Returned by the authentication server at successful login.	Note this key must be used by the client when connecting to the trade server and when placing trades.
12000	Ip address of primary trade server	
12001	Trading port on primary trade server	
12002	unused	
12003	unused	
13000	Order routes available	Semi-colon delimited list of destinations available to the client. (used in tag 100 on new order requests)
13001	Account type	1 = cash 2 = margin 3 = short
13002	Cash trade balance	
13003	Margin trade balance	
13005	Internal use	Internal use

Appendix 2 – Document Change Log

Date	Description
2007-02-23	Corrected/added miscellaneous message examples for tags 40 and 44. Also clarified message originator in message types.
2007-03-01	Added documentation for order statuses for A (pending new), 8 (order rejected)
2007-03-10	Added tag 12 (commission amount)
2007-08-10	Added GTC processing. Added documentation for tag 32. Added Day+Ext time in force processing
2007-10-10	Clarified field 31 for a trade message sent back at login
2007-11-14	Added documentation for order rejects and cancel rejects
2007-11-19	Added additional details to message examples
2008-06-30	Added market sell and market buy to cover
2008-08-04	Added additional message samples
2008-08-13	Textual content added for connecting to trade server
2008-08-14	Added disclamer re: not supporting 3rd party FIX engines
2011-12-28	Revised documentation. Market on close order type added.
2012-01-09	Document Release
2012-02-09	Added shortlist response type from server in appendix for type 35
2012-04-11	Updated sample call to web secure authenticator on test site
2012-04-25	Added suggestions for data providers
2012-05-23	Updated tag 76 clarification
2012-08-01	Updated test server ip address for method 1 of authentication.
