CURRENEX®

Specification

15 January 2013

CURRENEX

FIX Password Specification

Please contact Currenex sales representatives and help desk personnel for more information on this documentation.

Table of Contents

1 Currenex Fix service password 2

1.1 FIX Session Password rules and Support 2

1.2 Message Flow Diagrams 3

1.2.1 Logon with Incorrect Password 3

1.2.2 Logon with a Valid Password 3

1.2.3 Logon Using an Expired Password Followed by a Password Reset ... 4

1.3 FIX Messages- Password Reset 4

1.3.1 UserRequest 4

1.3.2 UserResponse 5

2 Quickfix users 6

2.1 Logon Code for Password 6

2.2 Additional Required Changes 6

Currenex Client Support

US Toll Free: + 1 877 939 8723

London: + 0 800 358 5331

Singapore: + 65 6826 7476

Tokyo: + 813 4530 7555

All Other Countries:

Primary: + 1 212-340-1790

Secondary: + 1 212-685-5950

support@currenex.com

Currenex Sales

New York: + 212 340 5220

London: + 44 203 395 7930

Tokyo: + 81 3 4530 7555

Singapore: + 65 6826 7476

Hong Kong: +852 2230 1566

Australia: + 612 8429 1204

sales@currenex.com

V1.0 |11.0 | PROD | DIR | COMM-456 | TO

The products and services outlined herein are only offered to professional clients or eligible counterparties through State Street Bank and Trust Company (a wholly-owned subsidiary of State Street Corporation), or, within certain jurisdictions throughout Europe, through State Street Global Markets International Limited which is authorized and regulated by the Financial Services Authority. Please note, certain foreign exchange business (spot and certain forward transactions) are not regulated by the Financial Services Authority. Clients should be aware of the risks of participating in trading foreign exchange, equities, fixed income or derivative instruments or in investments in non-liquid or emerging markets. Clients should be aware that products and services outlined herein may put their capital at risk. This communication is not intended for retail clients, nor for distribution to, and may not be relied upon by, any person or entity in any jurisdiction or country where such distribution or use would be contrary to applicable law or regulation. This publication or any portion hereof may not be reprinted, sold or redistributed without the prior written consent of State Street Global Markets. This communication is being distributed in Australia by State Street Bank and Trust Company ABN 70 062 819 630, AFSL 239679 and is intended only for wholesale clients, as defined in the Corporations Act 2001.

1 CURRENEX FIX SERVICE PASSWORD

The Currenex FIX service requires users connecting via the FIX protocol to present a password as part of the logon message. To successfully connect, a user needs to set the password field, FIX tag 554, to the valid password associated with the id specified in tag 49. Note that tag 554 is a Currenex customized tag. A logon message containing an invalid password shall be rejected. The Currenex response to a valid logon message will not contain tag 554. Refer to the below tables for sample successful logon messages exchanged between a client and Currenex.

```
<1 Logon (8=FIX.4.2
9=85
35=A
34=1
49=<logon_id>
52=20070807-19:57:55.703
56=CNX
98=0
108=10
141=Y
554=<password>
10=202 )
```

Table 1: Sample Client Logon Message

```
>1 Logon (8=FIX.4.2
9=72
35=A
49=CNX
56=<logon_id>
34=1
52=20070807-19:57:48.717
108=10
141=Y
98=0
10=123 )
```

Table 2: Sample Currenex Logon Response

1.1 FIX Session Password rules and Support

A password can be reset by the user at anytime by sending the appropriate UserRequest.

An expired password must be reset before trading can begin. A trading session status will be sent indicating the password needs to be reset, tags 340=1 and 58=”Password Reset is Required.” Until the password is reset, all further application messages will be rejected by the Currenex FIX gateway.

An account is locked after four (4) invalid password logon attempts. A locked account must be unlocked by the Currenex support desk before a user can logon successfully again.

Copyright © 2012 CURRENEX

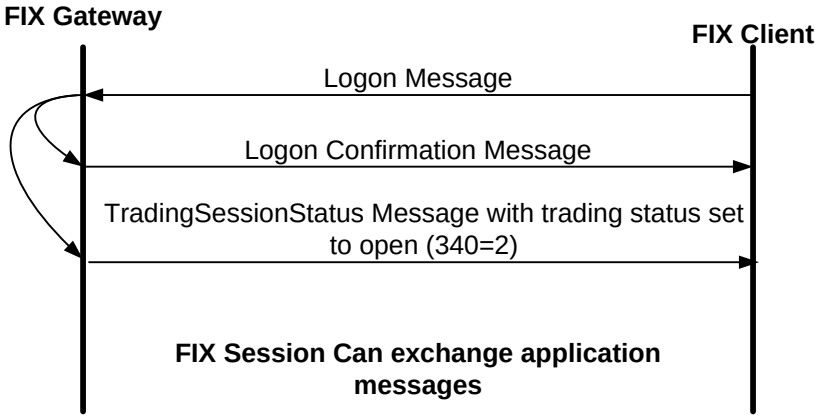
Confidential & Proprietary

1.2 Message Flow Diagrams

This section shows sample message workflow for invalid, valid, and valid but expired password logon attempts.

1.2.1 Logon with Incorrect Password

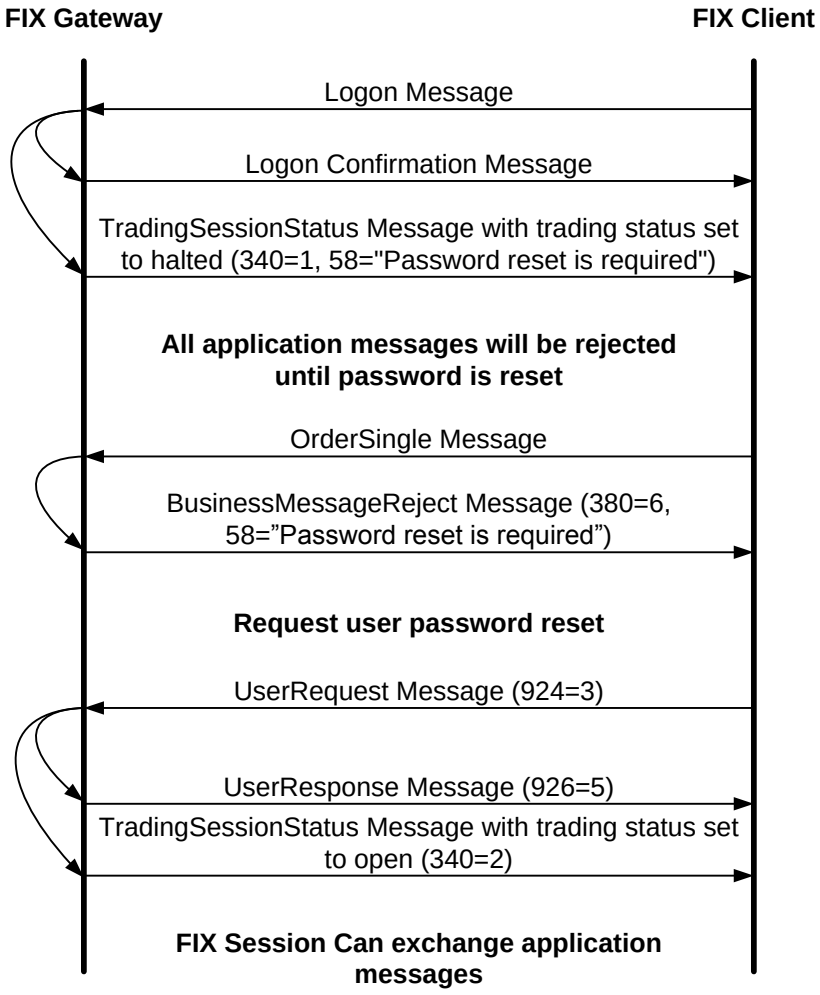
1.2.2 Logon with a Valid Password



Copyright © 2012 CURRENEX

Confidential & Proprietary

1.2.3 Logon Using an Expired Password Followed by a Password Reset



1.3 FIX Messages- Password Reset

1.3.1 UserRequest

Tag	Field Name	Required Tag	Comments
	Standard Header	Y	MsgType tag 35 = BE
923	UserRequestID	Y	Unique identifier for User request
924	UserRequestType	Y	3 = ChangePasswordForUser, only valid value
553	Username	Y	The SenderComp ID of the password to be changed
554	Password	Y	Current Password or pass phrase

Copyright © 2012 CURRENEX

Confidential & Proprietary

925	NewPassword	Y	New Password or pass phrase
	Standard Trailer	Y	

1.3.2 UserResponse

Tag	Field Name	Required Tag	Comments
	Standard Header	Y	MsgType tag 35 = BF
923	UserRequestID	Y	Unique identifier for User request
553	Username	Y	The SenderComp ID of the password to be changed
926	UserStatus	Y	Indicates the status of the user. Valid values are 3 = User not recognized 5 = UserPasswordChanged 6 = Other
927	UserStatusText	N	A text description associated with a user status
	Standard Trailer	Y	

Copyright © 2012 CURRENEX

Confidential & Proprietary

2 QUICKFIX USERS

The following changes are QuickFIX specific.

2.1 Logon Code for Password

Clients that use QuickFIX as their FIX engine need to modify their FIX code so that the password is returned as part of the logon message. Refer to the sample code in the below table

```
public void toAdmin(quickfix.Message message, SessionID
sessionID) {
  MsgType msgType = new MsgType();
  /* If Logon to CX, then set the password */
  if(message.getHeader().getField(msgType).valueEquals("A")) {
     message.setString(Password.FIELD, <ClientPassword>);
```

Table 3: Sample QuickFIX Logon Code

<ClientPassword> - Password given to client or reset by client

2.2 Additional Required Changes

QuickFIX users need to

1. add the password to the Logon message spec by modifying the file `quickfixj/etc/FIX42.xml`

   In the FIX42.xml file, search for "Logon" and add Password. It should look like the below

```
<message name="Logon" msgtype="A" msgcat="admin">
  <field name="EncryptMethod" required="Y" />
  <field name="HeartBtInt" required="Y" />
  <field name="RawDataLength" required="N" />
  <field name="RawData" required="N" />
  <field name="ResetSeqNumFlag" required="N" />
  <field name="MaxMessageSize" required="N" />
  <group name="NoMsgTypes" required="N">
  <field name="RefMsgType" required="N" />
  <field name="MsgDirection" required="N" />
  </group>
  <field name="Password" required="N"/>
  </message>
```

2. Change the QuickFIX field specification to include tag 554.

   Add the following to the QuickFIX Field specification:

   <field number="554" name="Password" type="STRING" />

Copyright © 2012 CURRENEX

Confidential & Proprietary