



**BORSA  
İSTANBUL**

**EQUITY MARKET  
BISTECH FIX CERTIFICATION PROGRAM –  
ORDER ENTRY STAGE –  
BASIC LEVEL**

**April 2015, Version 1.0**

**EQUITY MARKET  
BISTECH FIX CERTIFICATION PROGRAM –  
ORDER ENTRY STAGE –  
BASIC LEVEL**

..... A.Ş.’ BISTECH FIX ORDER ENTRY STAGE  
CONNECTIVITY TEST

To The Attention of Our Members:

The purpose of this test is to enable our members to test their own systems as they are in BISTECH FIX environment.

Order entry part of the test is segmented according to required phases of routine operation. It comprises Opening Session, Continuous Transaction and Primary Market (Initial Public Offering Fixed Price Method) sections. Please note that Throttling (Maximum number of orders allowed in unit time) test is excluded.

Please perform the below transactions in order and make sure to check the messages incoming at every step when you carry out these transactions.

First, determine the impact expected to occur when order is sent to the system.

Whether expected impact occurred or not after order or any request is sent to the system will be controlled by dimensional and contextual integrity and accuracy of the response which reached you with respect to the activity at the first degree. By controlling whether the activities are accurately processed or not at your main system which is the source of the activities carried out from every channel at the back in the second degree, proper blanks below each option will be ticked.

Inform the officers immediately if an unexpected situation occurs.

Please send the document to Borsa Istanbul officers after filling the part spared for you at the end of the test.

Legal Liability fully pertains to the member in disputes which may arise between the customers and members who do not use optional order and transaction functions in their FIX programs which are taking part in existing transaction rules of Equity Market and allowed by Equity Market to be used with BISTECH FIX.

For this reason, we recommend our members to inform their customers on this subject and form the proper legal basis with their customers.

Our members are fully responsible for faultless perform of the member system.

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# SECTION 1:

## CONNECTIVITY TEST

### 1. Logon with Password Change

- Send the first Logon message of the day with sequence number 1. (Password=LLL)
- Receive Logout message from the system with “Password Expired” message. (SessionStatus=8 – Password Expired)

Expected messages are received.       Problem with messages

- Send Logon message with Password Change. (554=LLL 925=MMM). Receive Logon message from the system with “Password Changed” status.

Expected messages are received.       Problem with messages

### 2. Logout Message

- Send Logout message and receive Logout message from the system with “Logout Complete”.

Expected messages are received.       Problem with messages

### 3. Logon Message with Reset Sequence Number Flag

- Send Logon message with reset sequence number. (ResetSeqNumFlag=Y, SeqNum=1). Receive Logon message from the system with “Active” status. (SessionStatus=0 SeqNum=1)

Expected messages are received.       Problem with messages

### 4. Sending Resend Request Message

#### Enter Order

- Send below orders to the system and receive Execution reports (Accepted):
  - GARAN.E BUY Price: 5.000 Quantity: 5 Lot      [ClOrdID=1]
  - GARAN.E BUY Price: 5.020 Quantity: 10 Lot      [ClOrdID=2]
  - GARAN.E BUY Price: 5.040 Quantity: 15 Lot      [ClOrdID=3]

Expected messages are received.       Problem with messages

### Logout

- Send Logout message and receive Logout message.

( ) Expected messages are received.      ( ) Problem with messages

### Executions

*While user is logged out, orders that will match with user's orders will be entered to the system. Orders of the user will be executed and execution messages (Execution Report - Trade) will be written to the message queue of the user.*

### Logon and Resend Request

- Send Logon message to the system without resetting the sequence number and receive Logon message from the system.

( ) Expected messages are received.      ( ) Problem with messages

- Send Resend Request message to the system due the fact that higher sequence number than expected is received. Following Execution Report messages will be received from the system as response to the Resend Request:
  - GARAN.E BUY Price: 5.000 Quantity: 5 Lot order fully traded.
  - GARAN.E BUY Price: 5.020 Quantity: 10 Lot order fully traded.
  - GARAN.E BUY Price: 5.040 Quantity: 15 Lot order fully traded.

( ) Expected messages are received.      ( ) Problem with messages

## 5. **Logout**

- Send Logout message and receive Logout message.

( ) Expected messages are received.      ( ) Problem with messages

## 6. Replying Resend Request Message

*Before user logs in to the system, expected sequence number on the server side will be decreased to a lower number manually. When user logs in to the system without resetting the sequence number, Resend Request message will be sent from the system.*

### Logon

- Send Logon message **without** resetting Sequence number and receive Logon message from system.

Expected messages are received.       Problem with messages

- Resend request message will be received from the system right after the Logon message. Resend Request message must be replied according to below principals. System will not respond with any message if there is not a problem with resent messages.
  - Sequence Reset message with GapFillFlag=Y and NewSeqNum field should be sent instead of session messages that will be resent.
  - Application messages should be resent with PossDupFlag=Y and OrigSendingTime fields.

Expected messages are sent.       Problem with messages

## 7. Logout

- Send Logout message and receive Logout message.

Expected messages are received.       Problem with messages

# **SECTION 2 :**

## **ORDER ENTRY AND FUNCTIONALITY**



**Instruments that will be used during test are listed below with Partition and Base Price information:**

<i><b>SYMBOL</b></i>	<i><b>Partition</b></i>	<i><b>Base Price</b></i>		<i><b>SYMBOL</b></i>	<i><b>Partition</b></i>	<i><b>Base Price</b></i>
<i>ADANA.E</i>	<i>1</i>	<i>6.000</i>		<i>GARAN.ME</i>	<i>1</i>	<i>5.000</i>
<i>ALCAR.E</i>	<i>1</i>	<i>5.000</i>		<i>DJIST.MF</i>	<i>1</i>	<i>5.000</i>
<i>FRIGO.E</i>	<i>1</i>	<i>0.210</i>		<i>GARDBLECW303.MV</i>	<i>1</i>	<i>5.000</i>
<i>ZOREN.E</i>	<i>2</i>	<i>5.000</i>		<i>GARDBLSCR555.MC</i>	<i>1</i>	<i>5.000</i>
<i>GARAN.R</i>	<i>1</i>	<i>5.000</i>		<i>GARDBLLCR303.MC</i>	<i>1</i>	<i>5.000</i>
<i>GARAN.TE</i>	<i>1</i>	<i>5.000</i>		<i>GARAN.BE</i>	<i>1</i>	<i>5.000</i>
<i>GARAN.TR</i>	<i>1</i>	<i>5.000</i>		<i>GARAN.HE</i>	<i>1</i>	<i>5.000</i>
<i>DJIST.TF</i>	<i>1</i>	<i>5.000</i>		<i>GARDBLECW303</i>	<i>1</i>	<i>-</i>
<i>GARDBLECW303.TV</i>	<i>1</i>	<i>5.000</i>		<i>EREDBLEPW305</i>	<i>1</i>	<i>-</i>
<i>GARDBLSCR555.TC</i>	<i>1</i>	<i>5.000</i>		<i>GARDBLSCR555</i>	<i>1</i>	<i>-</i>
<i>GARDBLLCR303.TC</i>	<i>1</i>	<i>5.000</i>		<i>GARDBLLCR303</i>	<i>1</i>	<i>-</i>
<i>GARDBLEPW303.TV</i>	<i>1</i>	<i>5.000</i>				

Reference Data (Security Definition, Security Status, Price Limits vs.) regarding the instruments that are listed will be available through FIX Reference Data connection.

**Order Details:**

- ✓ Orders should be **Limit** priced, **Day** and **Client** orders unless it is noted otherwise.
- ✓ Expire Date for **Good Till Date** orders should be two workdays from test day. (Test day: 15.04.2015 Expire Date: 17.04.2015)
- ✓ For orders with AccountType **FUND**, AFK field with **XRM** value must be included in the order. (PartyGroup)
- ✓ Values of Account and Reference fields will be checked for only steps that indicate these values in the scenario. These fields should be sent in compliance with FIX Specification document.

## **DropCopy Connection**

Connect to the DropCopy Port (will be given before test) with FIX DropCopy user. User should be stay connected during the test. After test is completed, message log file of DropCopy connection will be requested in addition to the message log files of FIX Order Entry connection.

- Send Logon message with resetting sequence number and receive Logon message from the system.

Expected messages are received.       Problem with messages

## **OPENING AUCTION**

**1. ADANA.E** enter orders listed below and receive Execution Reports (Accepted).

- i. ADANA.E – BUY – 200 lot – 6.200 TL – Day - Client [ClOrdID=10]
- ii. ADANA.E – BUY – 90 lot – 6.090 TL – Day - Client [ClOrdID=20]
- iii. ADANA.E – BUY – 80 lot – 6.080 TL – Day - Client [ClOrdID=30]
- iv. ADANA.E – BUY – 70 lot – 6.070 TL – Day - Client [ClOrdID=40]
- v. ADANA.E – BUY – 60 lot – 6.060 TL – Day - Client [ClOrdID=50]
- vi. ADANA.E – BUY – 50 lot – 6.050 TL – Fill and Kill - Client [ClOrdID=60]
- vii. ADANA.E – BUY – 40 lot – 6.050 TL – Good Till Date (Two workdays from test day) - Client [ClOrdID=70]
  
- viii. ADANA.E – SELL– 10 lot – 6.200 TL – Good Till Date (Test date) – FON – AFK: XRM [ClOrdID=80]
- ix. ADANA.E – SELL– 20 lot – 6.100 TL – Day - Client [ClOrdID=90]
- x. ADANA.E – SELL– 250 lot – 6.260 TL – Good Till Date (Two workdays from test day) – FUND – AFK: XRM [ClOrdID=100]
- xi. ADANA.E – SELL– 350 lot – 6.270 TL – Good Till Date (Two workdays from test day) – FUND – AFK: XRM [ClOrdID=110]
- xii. ADANA.E – SELL– 450 lot – 6.280 TL – Good Till Date (Test date) – FUND – AFK: XRM [ClOrdID=120]
- xiii. ADANA.E – SELL– 550 lot – 6.290 TL – Good Till Date (Two workdays from test day) – FUND – AFK: XRM [ClOrdID=130]
- xiv. ADANA.E – SELL– 650 lot – 6.300 TL – Day - FUND – AFK: XRM [ClOrdID=140]
- xv. ADANA.E – SELL– 750 lot – 6.300 TL – Good Till Date (Two workdays from test day) – FUND – AFK: XRM [ClOrdID=150]

Expected messages are received.       Problem with messages

**2. ADANA.E** cancel below orders and receive Execution Report messages. (cancelled)

- i. (CIOrdID=20) ADANA.E – BUY – 90 lot – 6.090 TL – Day - Client [CIOrdID=160]
- ii. (CIOrdID=100) ADANA.E – SELL– 250 lot – 6.260 TL – Good Till Date (Two days from test day) – Fund – AFK: XRM [CIOrdID=170]

Expected messages are received.       Problem with messages

**3. ADANA.E** modify quantity of below orders and receive Execution Report messages. (modified)

- i. (CIOrdID=30) – BUY – 79 lot – 6.080 TL – Day- Client [CIOrdID=180]
- ii. (CIOrdID=110) – SELL– 351 lot – 6.270 TL – GTD (Two days from test day) – Fund – AFK: XRM [CIOrdID=190]

Expected messages are received.       Problem with messages

**4. ADANA .E** modify below orders as underlined and receive Execution Report messages.

- i. (CIOrdID=40) BUY – 70 lot – 6.060 TL – Day – Client [CIOrdID=200]
- ii. (CIOrdID=120) SELL– 435 lot – 6.210 TL – GTD (Test date) – Fund – AFK: XRM [CIOrdID=210]

Expected messages are received.       Problem with messages

**5. ADANA.E** modify expire date of following orders and receive Execution report messages.

- i. (CIOrdID=50) BUY – 60 lot – 6.060 TL – GTD - Client [CIOrdID=220]  
Extend the expire date as two workdays from test day.
- ii. (CIOrdID=130) SELL– 550 lot – 6.290 TL – Day – Fund – AFK: XRM [CIOrdID=230]  
Shorten the validity of order expire date as “Day”.

Expected messages are received.       Problem with messages

**6. ADANA.E** Opening Auction will be ended.

Check the Execution Report and Trade Capture Report messages related with below executions:

- i. Trade 1: 10 lot 6.200TL
- ii. Trade 2: 20 lot 6.200 TL

Expected messages are received.       Problem with messages

Below Opening Auction order will be cancelled. Check the related Execution Report message.

- iii. (CIOrdID=60) BUY – 50 lot – 6.050 TL – Limit - Fak- Client

Expected messages are received.       Problem with messages

## CONTINUOUS AUCTION

**7. ZOREN.E** enter below orders (2nd partition) and receive Execution Report messages.

- i. BUY – 100 lot – 5.200 TL – Day - Client [CIOrdID=240]
- ii. SELL–20 lot – 5.200 TL – Good Till Date (Two workdays from test day) – Client [CIOrdID=250]

Check Execution Messages and Trade Report messages of trades below:

- i. Trade1: 20 lot 5.200 TL

Expected messages are received.       Problem with messages

**8. ZOREN.E** modify quantity of your partially traded order and receive Execution Report messages.

- i. (CIOrdID=240) BUY – 70 lot\* – 5.200 TL – Day – Client [CIOrdID=260]

Expected messages are received.       Problem with messages

\*Order with original quantity of 100 lots is partially executed and remains 80 lots in the orderbook before modification. When order is modified as 70 lots, partially executed quantity will be extracted and passive order in the orderbook will be updated as 50 lots. Check and confirm that 50 is received in the LeavesQty field (151=50). (This warning message is for users who send Order Cancel Replace Request for order modification.)

9. **ZOREN.E** modify quantity of your partially traded order and receive Execution Report messages.

- i. (CfOrdID=260) BUY – 90 lot\* – 5.200 TL – Day – Client [CfOrdID=270]

Expected messages are received.  Problem with messages

10. **ALCAR.E** enter below orders (1st partition) and receive Execution Report messages.

- i. BUY – 100 lot – 5.200 TL – Day - Client [CfOrdID=280]

- ii. SELL– 60 lot – 5.200 TL – Good Till Date (Two workdays from test day) – Client  
[CfOrdID=290]

Check Execution Messages and Trade Report messages of trades below:

- i.Trade 1: 60 lot 5.200 TL

Expected messages are received.  Problem with messages

11. **ALCAR.E** modify quantity of your partially traded order and receive Execution Report messages.

- i.(CfOrdID=280) BUY – 50 lot\*\* – 5.200 TL – Day – Client [CfOrdID=300]

Expected messages are received.  Problem with messages

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\* Order with original quantity of 100 lots is partially executed and remains 80 lots in the orderbook before modification. When order is modified as 90 lots, partially executed quantity will be extracted and passive order in the orderbook will be updated as 70 lots. Check and confirm that 70 is received in the LeavesQty field (151=70). (This warning messages is for users who send Order Cancel Replace Request for order modification.)

\*\* Order with original quantity of 100 lots is partially executed and remains 40 lots in the orderbook before modification. When order is modified as 50 lots, partially executed quantity will be extracted and passive order in the orderbook will be deleted. Check and confirm that 0 is received in the LeavesQty field (151=00). (This warning messages is for users who send Order Cancel Replace Request for order modification.)

12. Enter **BUY** orders to below instruments with price **5.000 TL**, **quantity100 lot** and receive Execution Report messages (Accepted).

i.	GARAN.R	[ClOrdID=310]
ii.	GARAN.TE	[ClOrdID=320]
iii.	GARAN.TR	[ClOrdID=330]
iv.	DJIST.TF	[ClOrdID=340]
v.	GARDBLECW303.TV	[ClOrdID=350]
vi.	GARDBLSCR555.TC	[ClOrdID=360]
vii.	GARDBLLCR303.TC	[ClOrdID=370]
viii.	GARDBLEPW303.TV	[ClOrdID=380]
ix.	GARAN.ME	[ClOrdID=390]
x.	DJIST.MF	[ClOrdID=400]
xi.	GARDBLECW303.MV	[ClOrdID=410]
xii.	GARDBLSCR555.MC	[ClOrdID=420]
xiii.	GARDBLLCR303.MC	[ClOrdID=430]
xiv.	GARAN.BE	[ClOrdID=440]
xv.	GARAN.HE – <b>Good Till Cancel</b>	[ClOrdID=450]
xvi.	GARDBLECW303	[ClOrdID=460]
xvii.	EREDBLEPW305	[ClOrdID=470]
xviii.	GARDBLSCR555	[ClOrdID=480]
xix.	GARDBLLCR303	[ClOrdID=490]

Expected messages are received.       Problem with messages

13. **FRIGO.E** enter below orders and receive Execution Report messages.

- |     |  |               |
|-----|--|---------------|
| i.  | BUY – 100 lot – 0.215 TL – Day - Client                                      | [ClOrdID=500] |
| ii. | SELL– 450 lot – 0.205 TL – Good Till Date (Two workdays from test day) - Müş | [ClOrdID=510] |

Check Execution Messages and Trade Report messages of trades below:

- Trade 1: 100 lot – 0.215

Expected messages are received.       Problem with messages

## End of Day Batch

Check cancel messages (Execution Report - cancelled) for Expired day orders and Good Till Date orders.

Expected messages are received.       Problem with messages

Logout from the system after expected cancel messages are received. System will be restarted after End of Day Batch.

Expected messages are received.       Problem with messages

## Next Day Connection

System will be restarted with next day configuration. "Execution Report - Restatement" messages will be sent from the system for Good Till Date orders that remain open for the upcoming trading day. In order to receive these Execution Report messages, Logon message must be sent **without** resetting Sequence number.

- Logon message, Sequence number=1, ResetSeqNumFlag=N (34=1, 141=N or do not send field 141)
- Logon message will be received.

Expected messages are received.       Problem with messages

- Logon message from the system will be sent with a Sequence number higher than 1. Client system should detect the Sequence gap and send a Resend Request message to the system. Check the Execution Report – Restatement messages that are sent from the system as response to the Resend Request.

Expected messages are received.       Problem with messages

## Failover to Secondary Gateway

*Terminate connection with Primary FIX Gateway IP and Ports and connect to secondary FIX Gateway IP and Port provided.*

- Send Logon message **without** resetting Sequence number and receive Logon message. ,

Expected messages are received.       Problem with messages

- Enter below orders to the secondary system and receive Execution Report (accepted) messages:
- GARAN.E BUY Price: 5.060 20 LOT (*Partition1*) [ClOrdID=4]
  - TCELL.E BUY Price: 7.500 10 LOT (*Partition2*) [ClOrdID=5]

Expected messages are received.       Problem with messages



## Test Evaluation

Title of the Brokerage House	
Technical Staff Participated in the Test	
Market Staff Participated in the Test	
Exchange Official Participated in the Test	
General Evaluation (to be filled by BIST officials)	

Please contact with [fix.nasdaqdestek@borsaistanbul.com](mailto:fix.nasdaqdestek@borsaistanbul.com) for your questions.