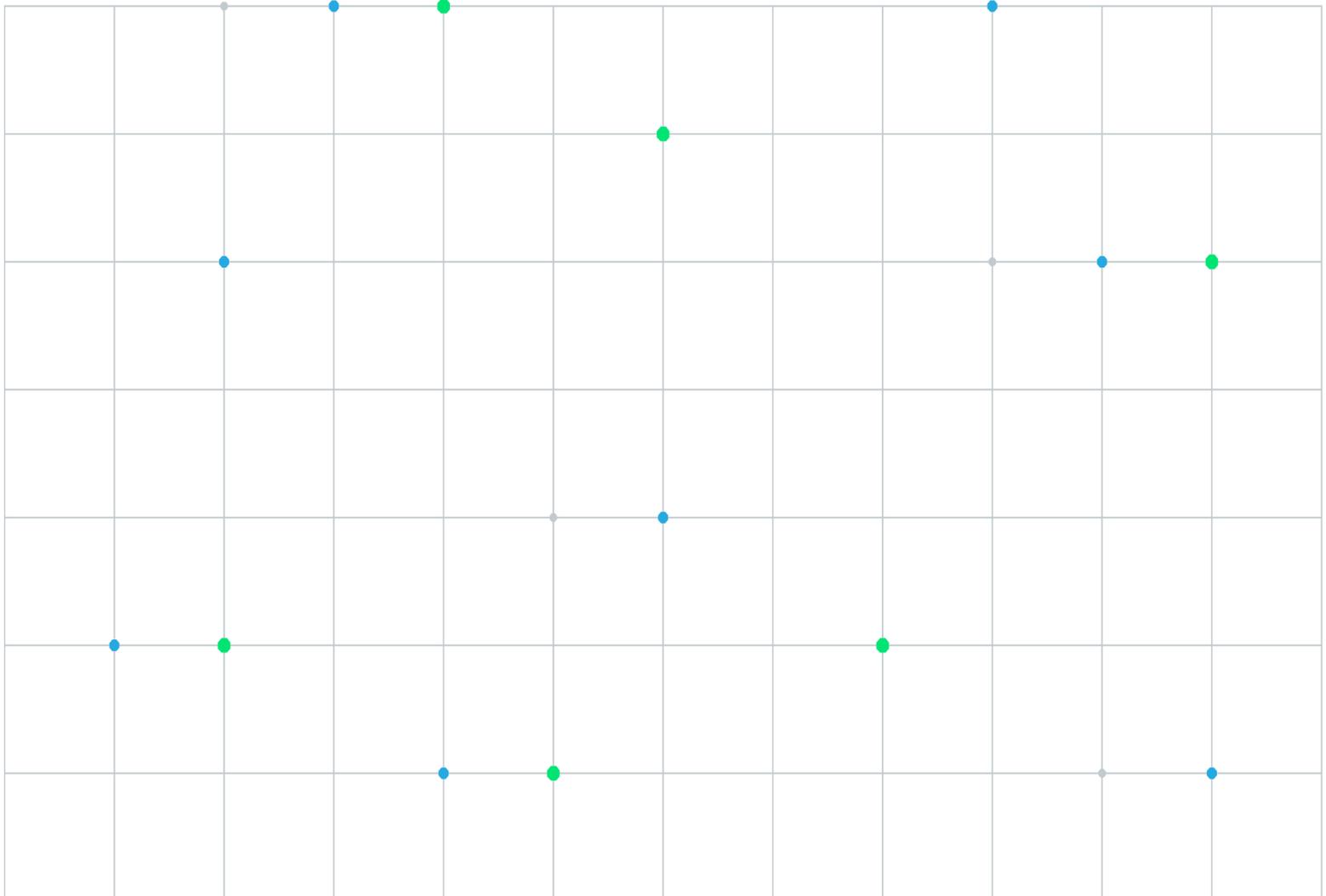


# AutoCert+ MDP 3.0 with Market by Order User Manual

22 September 2016



## Disclaimer

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Neither futures trading nor swaps trading are suitable for all investors, and each involves the risk of loss. Swaps trading should only be undertaken by investors who are Eligible Contract Participants (ECPs) within the meaning of Section 1a(18) of the Commodity Exchange Act. Futures and swaps each are leveraged investments and, because only a percentage of a contract's value is required to trade, it is possible to lose more than the amount of money deposited for either a futures or swaps position. Therefore, traders should only use funds that they can afford to lose without affecting their lifestyles and only a portion of those funds should be devoted to any one trade because traders cannot expect to profit on every trade. All examples discussed are hypothetical situations, used for explanation purposes only, and should not be considered investment advice or the results of actual market experience.

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# Getting Started

The AutoCert+ tool is an automated testing tool for validating application functionality. It provides an easy-to-use web interface for walking through CME Group certification scenarios.

To facilitate the process of connecting a customer application, CME Group provides a dedicated certification environment to allow customers to test their systems before they complete certification.

This Help system accompanies the AutoCert+ MDP 3.0 with Market by Order test suite to validate the dissemination of individual orders and quotes at prices levels for a given instrument.

For additional information see: [CME Market Data Platform - MDP 3.0 - Market by Order - Book Management](#)

## To run and navigate AutoCert+:

1. [Log into](#) the automated certification tool.
2. Review general AutoCert+ test suite [navigation](#) and [general interview](#) information.
3. Complete the [Interview](#) for this test suite.
4. Complete applicable test cases.
5. Complete the certification process from the [Post Certification](#) tab.

## What's New

The list below illustrates the updates made to the AutoCert+ MDP 3.0 with Market by Order Help system.

Date	Author	Topic	Description
------	--------	-------	-------------

# Interview

The interview consists of a series of questions about your trading application. Based on your responses, certain tests are required and others are optional. You must complete the pre-certification interview before running the test cases.

**To complete the interview:**

Answer each question and click **Complete** when finished.

**Note:** The items selected in the Interview will determine what types of instruments are tested.

**Current Testing Configuration**

Company Name:	<input type="text" value="QA"/>	Designated Contract Market:	<input type="text" value="CME Group"/>
Tester :	<a href="#">ACP User</a>	Application System:	<input type="text" value="CC - Automated Trading System 1.0 N/A"/>
		TestSuite:	<input type="text" value="MDP3 with MBO"/>

SenderComp : <input type="text" value="Select SenderComp"/> <span style="background-color: #f0a000; color: white; padding: 2px 5px; font-weight: bold;">ASSIGN</span>	<div style="background-color: #0070c0; color: white; padding: 2px;"><b>Test Suite Status:</b></div> Pre-Certification Interview : <span style="color: red; font-weight: bold;">❌ Not Complete</span> Test Suite Status: <span style="color: red; font-weight: bold;">❌ Not Tested</span> <a href="#">MDP3 with MBO Online Help</a>
---	--

Interview
Test Suite
Test Case
Post Certification

**Which of the following ones does your application support?**

- Market by Price
- Market by Order

**What types of instruments does your application use?**

- Futures
- Options

**What types of products does your system support?**

- Interest Rate
- Energy
- Equity
- FX
- Commodity

**Does your application process market data messages for spread instruments?**

- Yes
- No

**Does your application update settlement price information during the week?**

- Yes
- No

**Does your system support implied markets?**

- Yes
- No

Complete

# Certification Tests

The AutoCert+ MDP 3.0 with Market by Order certification tests consist of the following:

- [Security Definition Messages](#)
- [UDS Instrument Deletion](#)
- [Request for Quote Message for Options Instruments](#)
- [Book Management Messages](#)
- [Recovery](#)
- [ChannelReset](#)
- [Statistic Messages](#)
- [Market State Message](#)
- [Complex Book Management](#)

# Security Definition Messages

The Security Definition Messages tests consist of the following:

- [Security Definition Messages for Futures](#)
- [Security Definition Messages for Futures and Spreads](#)
- [Security Definition Messages for Options](#)
- [Security Definition Messages for Options and Spreads](#)

## Security Definition Messages for Futures

This test verifies that your application can properly receive and process [Security Definition \(tag 35-MsgType=d\)](#) messages for futures instruments.

Interview
Test Suite
Test Case
Post Certification

### Steps of the test: Security Definition Messages For Futures

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

**Purpose**

The purpose of this test is to verify that your application can properly receive and process Security Definition Messages.

**Selected Contract :** 1EJZ4,1EJH5,1EJZ4-1EJH5 - 644 Unlock

Category	IP	Port
Incremental Feed A	224.0.25.101	11644
Incremental Feed B	224.0.25.101	11744
Snapshot	224.0.25.127	19944
Instrument Replay	224.0.25.127	16644

**Note:** Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. START TEST

Description	Flag	Status
1	Confirm that your application successfully received and processed the Future Security Definition Message	● Not Tested

Key: ● not tested ● complete ● pending ● failed

REFRESH

### ▶ To run the Security Definition Messages for Futures test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Enter the following tag values from the Security Definition (35=d) message for a futures instrument that your application received:
  - tag 1145-EventTime, when tag 865-EventType=5 (Activation)
    - Note:** in YYYYMMDD hhmm format
  - tag 1145-EventTime, when tag 865-EventType=7 (Last eligible trade date)
    - Note:** in YYYYMMDD hhmm format
  - tag 1151-SecurityGroup
  - tag 1300-MarketSegmentID

Description	Flag	Status
1 Confirm that your application successfully received and processed the Future Security Definition Message Activation Date and Time : <input type="text"/> Expiration Date and Time : <input type="text"/> SecurityGroup : <input type="text"/> MarketSegmentID : <input type="text"/> <input type="button" value="Submit"/>		Pending

Click **Submit**.

## Security Definition Messages for Futures and Spreads

This test verifies that your application can properly receive and process [Security Definition \(tag 35-MsgType=d\)](#) messages for futures and futures spread instruments.

Interview	Test Suite	Test Case	Post Certification															
<b>Steps of the test: Security Definition Messages For Futures and Spreads</b>																		
<p style="color: red; font-size: small;">This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.</p>																		
<table border="1" style="width: 100%;"> <tr> <td style="width: 150px;"><b>Purpose</b></td> <td>The purpose of this test is to verify that your application can properly receive and process Security Definition Messages.</td> </tr> </table>				<b>Purpose</b>	The purpose of this test is to verify that your application can properly receive and process Security Definition Messages.													
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<table border="1" style="width: 100%;"> <tr> <td style="width: 150px;"><b>Selected Contract :</b> 1EJZ4,1EJH5,1EJZ4-1EJH5 - 644</td> <td style="text-align: right;"><input type="button" value="Unlock"/></td> </tr> </table>				<b>Selected Contract :</b> 1EJZ4,1EJH5,1EJZ4-1EJH5 - 644	<input type="button" value="Unlock"/>													
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Description	Flag	Status																
1 Confirm that your application successfully received and processed the Future Security Definition Message		Not Tested																
2 Confirm that your application successfully received and processed the Spread Security Definition Message		Not Tested																
Key:  not tested  complete  pending  failed																		
<input type="button" value="REFRESH"/>																		

### ▶ To run the Security Definition Messages for Futures and Spreads test:

- From the **Contract** drop-down, select the desired contract if the contract is not already locked.
- Click **START TEST**.
- Enter the following tag values from the Security Definition (35=d) message for a futures instrument that your application received:
  - tag 1145-EventTime, when tag 865-EventType=5 (Activation)  
**Note:** in YYYYMMDD hhmm format
  - tag 1145-EventTime, when tag 865-EventType=7 (Last eligible trade date)  
**Note:** in YYYYMMDD hhmm format

- tag 1151-SecurityGroup
- tag 1300-MarketSegmentID

	Description	Flag	Status
1	Confirm that your application successfully received and processed the Future Security Definition Message Activation Date and Time : <input type="text"/> Expiration Date and Time : <input type="text"/> SecurityGroup : <input type="text"/> MarketSegmentID : <input type="text"/> <input type="button" value="Submit"/>	●	Pending

Click **Submit**.

- Enter the following tag values from the Security Definition (35=d) message for a futures spread instrument that your application received:
  - tag 1145-EventTime, when tag 865-EventType=5 (Activation)  
**Note:** in YYYYMMDD hhmm format
  - tag 1145-EventTime, when tag 865-EventType=7 (Last eligible trade date)  
**Note:** in YYYYMMDD hhmm format
  - tag 1151-SecurityGroup
  - tag 1300-MarketSegmentID

2	Confirm that your application successfully received and processed the Spread Security Definition Message Instrument: 1EJZ4-1EJH5 IsinCode: 998571 Activation Date and Time : <input type="text"/> Expiration Date and Time : <input type="text"/> SecurityGroup : <input type="text"/> MarketSegmentID : <input type="text"/> <input type="button" value="Submit"/>	●	Pending
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Click **Submit**.

## Security Definition Messages for Options

This test verifies that your application can properly receive and process [Security Definition \(tag 35-MessageType=d\)](#) messages for options instruments.

Interview | Test Suite | **Test Case** | Post Certification

### Steps of the test: Security Definition Messages For Options

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

**Purpose**  
The purpose of this test is to verify that your application can properly receive and process Security Definition Messages.

**Selected Contract :** 0GEZ4 C9737,0GEZ4 P9737,UD:98: ST 0808992565 - 601 **Unlock**

Category	IP	Port
Incremental Feed A	224.0.25.101	11601
Incremental Feed B	224.0.25.101	11701
Snapshot	224.0.25.127	19901
Instrument Replay	224.0.25.127	16601

**Note:** Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. **START TEST**

Description	Flag	Status
1 Confirm that your application successfully received and processed the Options Security Definition Message		Not Tested

Key: not tested complete pending failed

**REFRESH**

**To run the Security Definition Messages for Options test:**

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Enter the following tag values from the Security Definition (35=d) message for an options instrument that your application received:
  - tag 1145-EventTime, when tag 865-EventType=5 (Activation)  
**Note:** in YYYYMMDD hhmm format
  - tag 1145-EventTime, when tag 865-EventType=7 (Last eligible trade date)  
**Note:** in YYYYMMDD hhmm format
  - tag 1151-SecurityGroup
  - tag 1300-MarketSegmentID

Description	Flag	Status
1 Confirm that your application successfully received and processed the Options Security Definition Message Activation Date and Time : <input type="text"/> Expiration Date and Time : <input type="text"/> SecurityGroup : <input type="text"/> MarketSegmentID : <input type="text"/> StrikePrice : <input type="text"/> <b>Submit</b>		Pending

Click **Submit**.

## Security Definition Messages for Options and Spreads

This test verifies that your application can properly receive and process [Security Definition \(tag 35-MsgType=d\)](#) messages for options and options spread contracts.

Interview
Test Suite
Test Case
Post Certification

### Steps of the test: Security Definition Messages For Options and Spreads

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

**Purpose**

The purpose of this test is to verify that your application can properly receive and process Security Definition Messages.

**Selected Contract :** 0GEZ4 C9737,0GEZ4 P9737,UD:98: ST 0806992565 - 601 Unlock

Category	IP	Port
Incremental Feed A	224.0.25.101	11601
Incremental Feed B	224.0.25.101	11701
Snapshot	224.0.25.127	19901
Instrument Replay	224.0.25.127	16601

**Note:** Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. START TEST

Description	Flag	Status
1 Confirm that your application successfully received and processed the Options Security Definition Message	●	Not Tested
2 Confirm that your application successfully received and processed the Spread Security Definition Message	●	Not Tested

Key: ● not tested ● complete ● pending ● failed

REFRESH

### ▶ To run the Security Definition Messages for Options and Spreads test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Enter the following tag values from the Security Definition (35=d) message for an options instrument that your application received:
  - tag 1145-EventTime, when tag 865-EventType=5 (Activation)  
**Note:** in YYYYMMDD hhmm format
  - tag 1145-EventTime, when tag 865-EventType=7 (Last eligible trade date)  
**Note:** in YYYYMMDD hhmm format
  - tag 1151-SecurityGroup
  - tag 1300-MarketSegmentID
  - tag 202-StrikePrice

	Description	Flag	Status
1	<p>Confirm that your application successfully received and processed the Options Security Definition Message</p> <p>Activation Date and Time : <input type="text"/></p> <p>Expiration Date and Time : <input type="text"/></p> <p>SecurityGroup : <input type="text"/></p> <p>MarketSegmentID : <input type="text"/></p> <p>StrikePrice : <input type="text"/></p> <p><input type="button" value="Submit"/></p>	●	Pending

Click **Submit**.

4. Enter the following tag values from the Security Definition (35=d) message for an options spread instrument that your application received:
- tag 1145-EventTime, when tag 865-EventType=5 (Activation)  
**Note:** in YYYYMMDD hhmm format
  - tag 1145-EventTime, when tag 865-EventType=7 (Last eligible trade date)  
**Note:** in YYYYMMDD hhmm format
  - tag 1151-SecurityGroup
  - tag 1300-MarketSegmentID

2	<p>Confirm that your application successfully received and processed the Spread Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm</p> <p>Instrument UD:F\$: GN 0814993276 SecurityID: 993276</p> <p>Activation Date and Time : <input type="text"/></p> <p>Expiration Date and Time : <input type="text"/></p> <p>SecurityGroup : <input type="text"/></p> <p>MarketSegmentID : <input type="text"/></p> <p><input type="button" value="Submit"/></p>	●	Pending
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Click **Submit**.

# UDS Instrument Deletion

This test verifies that your application can receive and process [Security Definition \(tag 35-MsgType=d\)](#) messages signaling the modification and deletion of UDS instruments.

Interview
Test Suite
Test Case
Post Certification

### Steps of the test: UDS Instrument Deletion

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

**Purpose**

The purpose of this test is to verify that your application can receive and process Security Definition messages signaling the modification and deletion of UDS Instruments.

Category	IP	Port
Incremental Feed A	224.0.25.101	11650
Incremental Feed B	224.0.25.101	11750
Snapshot	224.0.25.127	19950
Instrument Replay	224.0.25.127	16650

**Note:** Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.

START TEST

Description	Flag	Status
1	●	Not Tested

Key: ● not tested ● complete ● pending ● failed

REFRESH

▶ **To run the UDS Instrument Deletion test:**

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Receive and process the Security Definition - Delete [35=d, tag 980-SecurityUpdateAction=D (Delete)] message.

Enter the following tag values:

- tag 1151-SecurityGroup
- tag 1145-EventTime, when tag 865-EventType=5 (Activation)

**Note:** in YYYYMMDD hhmm format

Description	Flag	Status
<div style="border: 1px solid #ccc; padding: 5px;"> <p>1</p> <p>Receive and process the Security Definition Delete message. Date/Time format should be entered as: YYYYMMDD hhmm</p> <p>Instrument: UD:BS: VT 0811992698 SecurityID: 992698</p> <p>SecurityGroup : <input style="width: 100px;" type="text"/></p> <p>Activation Date and Time : <input style="width: 100px;" type="text"/></p> <p style="text-align: right;"><span style="background-color: #ffc107; padding: 2px 5px;">Submit</span></p> </div>	●	Pending

Click **Submit**.

# Request for Quote Message for Options Instruments

This test verifies that your application can properly receive and process a [Request for Quote \(RFQ\) \(tag 35-MsgType=R\)](#) message for Options instruments.

Interview
Test Suite
Test Case
Post Certification

### Steps of the test: Request For Quote Message for Options Instruments

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step1.

**Purpose**

The Purpose of this test is to verify that your application can properly receive and process RFQ for options instruments.

**Selected Contract:** 1GEM4,1GEU4,1GEM4-1GEU4 - 644 Unlock

Category	IP	Port
Incremental Feed A	224.0.25.101	11644
Incremental Feed B	224.0.25.101	11744
Snapshot	224.0.25.127	19944
Instrument Replay	224.0.25.127	16644

**Note:** Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. START TEST

Description	Flag	Status
1	●	Not Tested

Key: ● not tested ● complete ● pending ● failed

REFRESH

## ▶ To run the Request for Quote Message for Options Instruments test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Confirm that your application successfully received and processed an RFQ message.

Enter the tag 38-OrderQty value from the RFQ message.

Description	Flag	Status
1	●	Pending

Confirm that your application successfully received and processed RFQ message.

OrderQty :

Submit

Click **Submit**.

# Book Management Messages

Book Management Messages tests include the following:

- [Book Management Messages for MBP \(Outright Only\)](#)
- [Consolidated Book Management Messages for MBP \(Implied\)](#)
- [Book Management Messages for MBO](#)
- [Book Management Messages for Implied MBO](#)

## Book Management Messages for MBO (Outright Only)

This test verifies that your application can properly receive and process book management information sent in [Market Data Incremental Refresh \(tag 35-MsgType=X\)](#) messages for outright markets.

1. From the **Contract** drop-down, select the desired contracts if the contracts are not already locked.
2. Click **START TEST**.

Interview
Test Suite
Test Case
Post Certification

**Steps of the test: Book Management Messages for Market by Price**

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step1.

**Purpose**

The purpose of this test is to verify that your application can properly receive and process book management information for non implied markets.

**Selected Contract :** 3AAOU6 C11000,1AAOU6 P12000,UD:D\$: GN 0920960053 - 709 Unlock

**Selected Second Contract :** 2AAOU6 C12000,1AAOU6 P13500,UD:D\$: GN 0920960052 - 709 Unlock

Category	IP	Port
Incremental Feed A	239.43.100.26	15709
Incremental Feed B	239.43.100.26	16709
Snapshot MBP	10.11.137.220	20030
Snapshot MBO		
Instrument Replay	10.11.138.230	

**Note:** Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. START TEST

### ▶ To run the Consolidated Book Management Messages (Outright Only) test:

1. Confirm that the books are empty for the selected instruments.  
Click **Yes** or **No**.
2. Receive a set of orders for the **first** instrument.
3. Receive cancellations for orders.
4. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the **first** instrument.

4	Confirm quantities and prices on the book for the first instrument (non implied).				Pending
	Instrument: 1EJZ4 IsinCode: 998531				
	BuyPrice	BuyQuantity	SellPrice	SellQuantity	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
<input type="button" value="Submit"/>					

Click **Submit**.

5. Receive a set of orders for the **second** instrument.
6. Receive cancellations for orders.
7. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the **second** instrument.

7	Confirm quantities and prices on the book for the second instrument (non implied).				Pending
	Instrument: 0GEH5 IsinCode: 998480				
	BuyPrice	BuyQuantity	SellPrice	SellQuantity	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	

Click **Submit**.

## Consolidated Book Management Messages for MDP (Implied)

This test verifies that your application can properly receive and process book management information [Market Data Incremental Refresh \(tag 35-MsgType=X\)](#) messages for implied markets.

Interview
Test Suite
Test Case
Post Certification

### Steps of the test: Consolidated Book Management Messages (implied)

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

**Purpose**

The purpose of this test is to verify that your application can properly receive and process book management information for implied markets.

**Selected Contract :** 5EBZ4,5EBH5,5EBZ4-5EBH5 - 662 Unlock

**Selected Second Contract :** 6EJZ4,6EJH5,6EJZ4-6EJH5 - 662 Unlock

Category	IP	Port
Incremental Feed A	224.0.25.101	11662
Incremental Feed B	224.0.25.101	11762
Snapshot	224.0.25.127	19962
Instrument Replay	224.0.25.127	16662

**Note:** Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. START TEST

Description	Flag	Status
1 Confirm that all 6 books are empty.	<input type="radio"/>	Not Tested
2 Receive a set of orders for one of the selected instrument.	<input type="radio"/>	Not Tested
3 Receive cancellations for orders.	<input type="radio"/>	Not Tested
4 Confirm quantities and prices on the book for one of the selected instrument (including implied book).	<input type="radio"/>	Not Tested
5 Receive a set of orders one of the selected instrument.	<input type="radio"/>	Not Tested
6 Receive cancellations for orders.	<input type="radio"/>	Not Tested
7 Confirm quantities and prices on the book one of the selected instrument (including implied book).	<input type="radio"/>	Not Tested

Key: ● not tested ● complete ● pending ● failed

REFRESH

**To run the Book Management Messages (Implied) test:**

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Confirm that the books are empty.  
Click **Yes** or **No**.
4. Receive a set of orders for one of the selected instruments.
5. Receive cancellations for orders.
6. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the selected instrument (including implied book).



**Steps of the test: Book Management Messages for Market by Order**

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step1.

<b>Purpose</b>
The purpose of this test is to verify that your application can properly receive and process book management information for non implied markets.

**Selected Contract :** 0ZCN7,0ZCN8,0ZCN7-0ZCN8 - 701 Unlock

Category	IP	Port
Incremental Feed A	239.43.1.65	15701
Incremental Feed B	224.0.29.126	16701
Snapshot MBP	224.0.25.126	19942
Snapshot MBO		
Instrument Replay	224.0.25.126	16942

**Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.** START TEST

Description	Flag	Status
1 Confirm books are empty for selected instruments.	●	Not Tested
2 Receive a set of orders for the first instrument.	●	Not Tested
3 Receive cancellations for orders.	●	Not Tested
4 Confirm quantities, prices and priorities on the book for one of the selected instruments.	●	Not Tested

Key: ● not tested ● complete ● pending ● failed

REFRESH

- Confirm that the books are empty for the selected instruments.



## Implied Book Management Messages for MBO

This test verifies that your application can properly receive and process book management information [Market Data Incremental Refresh \(tag 35-MsgType=X\)](#) messages for implied markets for MBO.

▶ **To run the Implied Book Management Messages for MBO test:**

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Confirm that the books are empty.  
Click **Yes** or **No**.
4. Receive a set of orders for one of the selected instruments.
5. Confirm quantities and prices in the proper book priority for one of the selected instruments.
6. Confirm the implied quantities and prices on the book for the same instrument.

# ChannelReset

Channel Reset topics include:

- [Channel Reset MBP](#)
- [Channell Reset MBO](#)

## Channel Reset for MBP

This test verifies that your application can properly receive and process Channel Reset [[Market Data Incremental Refresh \(tag 35-MsgType=X\)](#)] messages.

Interview
Test Suite
Test Case
Post Certification

### Steps of the test: Channel Reset

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

**Purpose**

The Purpose of this test is to verify that your application can properly receive and process channel reset messages.

Please assign a SenderCompID and make sure a valid contract is selected to start certifying a test.

Description	Flag	Status
1 Confirm books are empty for the selected instruments.	●	Not Tested
2 Receive market data for a set of orders.	●	Not Tested
3 Confirm quantities and prices on the book for the selected instrument.	●	Not Tested
4 Receive Channel Reset message.	●	Not Tested
5 Receive resent book.	●	Not Tested
6 Confirm quantities and prices for book and statistic messages for the selected instrument.	●	Not Tested

REFRESH
Key: ● not tested ● complete ● pending ● failed

### ▶ To run the Channel Reset test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Confirm that the books are empty.  
Click **Yes** or **No**.
4. Receive market data for a set of orders.
5. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the selected instrument.

3	Confirm quantities and prices on the book for the selected instrument. Instrument: 0EJU4 IsinCode: 998560				Pending
	<b>BuyPrice</b>	<b>BuyQuantity</b>	<b>SellPrice</b>	<b>SellQuantity</b>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
<input type="button" value="Submit"/>					

6. Receive a Channel Reset [tag 35-MsgType=X, 269-MDEntryType=J (Empty Book)] message
7. Receive resent book and statistics messages.
8. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) from the book for the selected instrument.

6	Confirm quantities and prices for book and statistic messages for the selected instrument. Instrument: 0EJU4 IsinCode: 998560				Pending
	<b>BuyPrice</b>	<b>BuyQuantity</b>	<b>SellPrice</b>	<b>SellQuantity</b>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
<input type="button" value="Submit"/>					

## Channel Reset for MBO

This test verifies that your Market by Order application can properly receive and process Channel Reset [[Market Data Incremental Refresh \(tag 35-MsgType=X\)](#)] messages.

### Steps of the test: Channel Reset for Market by Order

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step1.

**Purpose**  
The Purpose of this test is to verify that your application can properly receive and process channel reset messages.

**Selected Contract :** 0ZCN7,0ZCN8,0ZCN7-0ZCN8 - 701 Unlock

Category	IP	Port
Incremental Feed A	239.43.1.65	15701
Incremental Feed B	224.0.29.126	16701
Snapshot MBP	224.0.25.126	19942
Snapshot MBO		
Instrument Replay	224.0.25.126	16942

**Note:** Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. START TEST

Description	Flag	Status
1 Confirm books are empty for the selected instruments.		Not Tested
2 Receive market data for a set of orders.		Not Tested
3 Confirm quantities and prices on the book for the selected instrument.		Not Tested
4 Receive Channel Reset message.		Not Tested
5 Receive resent book.		Not Tested
6 Confirm quantities and prices for book and statistic messages for the selected instrument.		Not Tested

Key: not tested complete pending failed

REFRESH

#### ▶ To run the Channel Reset for Market by Order test:

- From the **Contract** drop-down, select the desired contract if the contract is not already locked.
- Click **START TEST**.
- Confirm that the books are empty.  
Click **Yes** or **No**.
- Receive market data for a set of orders.
- Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the selected instrument.

3	Confirm quantities and prices on the book for the selected instrument.				Pending
	Instrument: 0EJU4 IsinCode: 998560				
	<u>BuyPrice</u>	<u>BuyQuantity</u>	<u>SellPrice</u>	<u>SellQuantity</u>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	
<span style="background-color: orange; color: white; padding: 2px;">Submit</span>					

6. Receive a Channel Reset [tag 35-MsgType=X, 269-MDEntryType=J (Empty Book)] message
7. Receive resent book and statistics messages.
8. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) from the book for the selected instrument.

6	Confirm quantities and prices for book and statistic messages for the selected instrument. Instrument: 0EJU4 IsinCode: 998560			
	<b>BuyPrice</b>	<b>BuyQuantity</b>	<b>SellPrice</b>	<b>SellQuantity</b>
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>
<input type="button" value="Submit"/>				
			 Pending	

# Recovery

Recovery tests include the following:

- [Recovery \(Outright Only\)](#)
- [Consolidated Recovery \(Implied\)](#)
- [Recovery for Market by Order](#)
- [Implied Recovery for Market by Order](#)

## Recovery (Outright Only)

This test verifies that your application can perform a recovery test for outright books.

### Steps of the test: Recovery Test for Market by Price

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step1.

#### Purpose

The purpose of this test is to verify that your application can perform a recovery test for non-implied books. For example, if a user does not receive all messages from the system during a trading session, it will be necessary to perform recovery to update the books.

**Selected Contract :** 0ZCN7,0ZCN8,0ZCN7-0ZCN8 - 701 Unlock

Category	IP	Port
Incremental Feed A	239.43.1.65	15701
Incremental Feed B	224.0.29.126	16701
Snapshot MBP	224.0.25.126	19942
Snapshot MBO		
Instrument Replay	224.0.25.126	16942

**Note:** Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.

START TEST

Description	Flag	Status
1 Confirm books are empty for selected instruments.		Not Tested
2 Receive market data for a set of orders and cancels for the instrument.		Not Tested
3 Miss market data for a set of orders and cancels.		Not Tested
4 Receive market data for a set of orders and cancels for the recovery instrument.		Not Tested
5 Confirm quantities and prices on the book for the selected instrument (non implied).		Not Tested
6 Miss security definition message for the recovery instrument.		Not Tested
7 Receive market data for a set of orders for the recovery instrument.		Not Tested
8 Confirm quantities and prices on the book for the recovery instrument (non implied).		Not Tested

Key:  not tested  complete  pending  failed

REFRESH

 **To run the Recovery (Outright Only) test:**

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Confirm that the books are empty.  
Click **Yes** or **No**.
4. Receive market data for a set of orders and cancels for the instrument.
5. Miss market data for a set of orders and cancels.
6. Receive market data for a set of orders and cancels for the recovery instrument.
7. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the selected instrument.

Description	Flag	Status																																										
1 Confirm books are empty for selected instruments.		Complete																																										
2 Receive market data for a set of orders and cancels for the instrument.		Complete																																										
3 Miss market data for a set of orders and cancels.		Complete																																										
4 Receive market data for a set of orders and cancels for the recovery instrument.		Complete																																										
5 Confirm quantities and prices on the book for the selected instrument (non implied). Instrument: 0ZCN7 SecurityID: 997060 <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"></td> <td style="width: 15%;"><u>BuyPrice</u></td> <td style="width: 15%;"><u>BuyQuantity</u></td> <td style="width: 15%;"><u>SellPrice</u></td> <td style="width: 15%;"><u>SellQuantity</u></td> <td style="width: 15%;"></td> </tr> <tr> <td></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td></td> </tr> <tr> <td></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td></td> </tr> <tr> <td></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td></td> </tr> <tr> <td></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td></td> </tr> <tr> <td></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td></td> </tr> <tr> <td></td> <td colspan="5" style="text-align: center;"><b>Submit</b></td> </tr> </table>		<u>BuyPrice</u>	<u>BuyQuantity</u>	<u>SellPrice</u>	<u>SellQuantity</u>			<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>			<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>			<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>			<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>			<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>			<b>Submit</b>						Pending
	<u>BuyPrice</u>	<u>BuyQuantity</u>	<u>SellPrice</u>	<u>SellQuantity</u>																																								
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>																																								
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	<b>Submit</b>																																											
6 Miss security definition message for the recovery instrument.		Not Tested																																										
7 Receive market data for a set of orders for the recovery instrument.		Not Tested																																										
8 Confirm quantities and prices on the book for the recovery instrument (non implied).		Not Tested																																										

Key: not tested complete pending failed

**REFRESH**

Click **Submit**.

8. Miss a Security Definition (tag 35-MsgType=d) message for the recovery instrument.
9. Receive market data for a set of orders for the recovery instrument.
10. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the recovery instrument.

Click **Submit**.

## Consolidated Recovery (Implied)

This test verifies that your application can perform a recovery test for implied books.

Interview
Test Suite
Test Case
Post Certification

### Steps of the test: Recovery Test (implied)

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

**Purpose**

The purpose of this test is to verify that your application can perform a recovery test for implied books. For example, if a user does not receive all messages from the system during a trading session, it will be necessary to perform recovery to update the books.

**Selected Contract :** 1GEM4,1GEU4,1GEM4-1GEU4 - 644 Unlock

Category	IP	Port
Incremental Feed A	224.0.25.101	11644
Incremental Feed B	224.0.25.101	11744
Snapshot	224.0.25.127	19944
Instrument Replay	224.0.25.127	16644

**Note:** Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. START TEST

Description	Flag	Status
1 Confirm books are empty for selected instruments.	<input type="radio"/>	Not Tested
2 Receive market data for a set of orders and cancels for the instrument.	<input type="radio"/>	Not Tested
3 Miss market data for a set of orders and cancels.	<input type="radio"/>	Not Tested
4 Receive market data for a set of orders and cancels for the recovery instrument.	<input type="radio"/>	Not Tested
5 Confirm quantities and prices on the book for the selected instrument (including implied book).	<input type="radio"/>	Not Tested
6 Miss security definition message for the recovery instrument.	<input type="radio"/>	Not Tested
7 Receive market data for a set of orders for the recovery instrument.	<input type="radio"/>	Not Tested
8 Confirm quantities and prices on the book for the recovery instrument (including implied book).	<input type="radio"/>	Not Tested

Key: ● not tested ● complete ● pending ● failed

REFRESH

#### ▶ To run the Recovery (Implied) test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Confirm that the books are empty.  
Click **Yes** or **No**.
4. Receive market data for a set of orders and cancels for the instrument.
5. Miss market data for a set of orders and cancels.
6. Receive market data for a set of orders and cancels for the recovery instrument.
7. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the selected instrument.

5	Confirm quantities and prices on the book for the selected instrument (including implied book).				●	Pending
	Instrument: 0EJU4 IsinCode: 998560					
	BuyPrice	BuyQuantity	SellPrice	SellQuantity		
	0.0	0	0.0	0		
	0.0	0	0.0	0		
	0.0	0	0.0	0		
	0.0	0	0.0	0		
<input type="button" value="Submit"/>						

Click **Submit**.

8. Miss Security Definition message for the recovery instrument.
9. Receive market data for a set of orders for the recovery instrument.
10. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the recovery instrument.

8	Confirm quantities and prices on the book for the recovery instrument (including implied book).				●	Pending
	Instrument: 0EJU4 IsinCode: 998560					
	BuyPrice	BuyQuantity	SellPrice	SellQuantity		
	0.0	0	0.0	0		
	0.0	0	0.0	0		
	0.0	0	0.0	0		
	0.0	0	0.0	0		
<input type="button" value="Submit"/>						

Click **Submit**.

## Recovery for Market by Order

This test verifies that your application can perform a Market by Order recovery for futures and/or options instruments. For example, if a user does not receive all messages from the system during a trading session, it will be necessary to perform a recovery to update the books.

Interview	Test Suite	Test Case	Post Certification
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**Steps of the test: Recovery Test for Market by Order**

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step1.

**Purpose**  
The purpose of this test is to verify that your application can perform a recovery test for non-implied books. For example, if a user does not receive all messages from the system during a trading session, it will be necessary to perform recovery to update the books.

**Selected Contract :** 0GLBZ6,0GLBF7,0GLBZ6-0GLBF7 - 654 **Unlock**

Category	IP	Port
Incremental Feed A	224.0.28.124	11654
Incremental Feed B	224.0.25.101	11754
Snapshot MBP	224.0.28.122	19654
Snapshot MBO	224.0.25.254	20654
Instrument Replay	224.0.28.124	16654

**Note:** Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. **START TEST**

▶ **To run the Recovery for Market by Order test:**

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.

**Selected Contract :** 0GLBZ6,0GLBF7,0GLBZ6-0GLBF7 - 654 **Unlock**

Category	IP	Port
Incremental Feed A	224.0.28.124	11654
Incremental Feed B	224.0.25.101	11754
Snapshot MBP	224.0.28.122	19654
Snapshot MBO	224.0.25.254	20654
Instrument Replay	224.0.28.124	16654

**Note:** Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. **START TEST**

Description	Flag	Status
1 Confirm books are empty for selected instruments.		Not Tested
2 Receive market data for a set of orders and cancels for the instrument.		Not Tested
3 Miss market data for a set of orders and cancels.		Not Tested
4 Receive market data for a set of orders and cancels for the selected instrument.		Not Tested
5 Confirm quantities, prices and order priority on the book for the selected instruments.		Not Tested
6 Miss security definition message for the recovery instrument.		Not Tested
7 Receive market data for a set of orders for the recovery instrument.		Not Tested
8 Confirm quantities, prices and order priority on the book for the recovery instrument.		Not Tested

**Key:** not tested complete pending failed

**REFRESH**

3. Confirm that the books are empty.  
Click **Yes** or **No**.
4. Receive market data for a set of orders and cancels for the instrument.
5. Miss market data for a set of orders and cancels.

Description		Flag	Status																								
1	Confirm books are empty for selected instruments.		Complete																								
2	Receive market data for a set of orders and cancels for the instrument.		Complete																								
3	Miss market data for a set of orders and cancels.		Complete																								
4	Receive market data for a set of orders and cancels for the selected instrument.		Complete																								
5	<p>Confirm quantities, prices and order priority on the book for the selected instruments. Instrument: 0GLBZ6 SecurityID: 998170</p> <table border="0"> <tr> <td><b>BuyPrice</b></td> <td><b>BuyQuantity</b></td> <td><b>SellPrice</b></td> <td><b>SellQuantity</b></td> </tr> <tr> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> </tr> <tr> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> </tr> <tr> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> </tr> <tr> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> </tr> <tr> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> <td><input type="text" value="0.0"/></td> <td><input type="text" value="0"/></td> </tr> </table> <p><b>Submit</b></p>	<b>BuyPrice</b>	<b>BuyQuantity</b>	<b>SellPrice</b>	<b>SellQuantity</b>	<input type="text" value="0.0"/>	<input type="text" value="0"/>		Pending																		
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<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>																								
6	Miss security definition message for the recovery instrument.		Not Tested																								
7	Receive market data for a set of orders for the recovery instrument.		Not Tested																								
8	Confirm quantities, prices and order priority on the book for the recovery instrument.		Not Tested																								

6. Recover the book for one of the selected instruments.
7. Confirm quantities and prices in the proper book priority for one of the selected instruments.
8. Miss a Security Definition (tag 35-MsgType=d) message for the recovery instrument.
9. Recover the missed instrument and receive market data consisting of a set of orders for the missed instrument.
10. Confirm quantities and prices in the proper book priority for the recovered instrument.  
Click **Submit**.

## Implied Recovery for Market by Order

This test verifies that your application can perform a recovery test for implied books for Market by Order.

**To run the Implied Recovery for Market by Order test:**

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Confirm that the books are empty.

Click **Yes** or **No**.

4. Receive market data for a set of orders and cancels for the instrument.
5. Miss market data for a set of orders and cancels.
6. Receive market data for a set of orders and cancels for the recovery instrument.
7. Confirm implied quantities and prices on the book for the selected instrument.

Click **Submit**.

# Statistic Messages

This test verifies that your application can properly process statistics received in [Market Data Incremental Refresh \(tag 35-MsgType=X\)](#) messages.

Interview
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Post Certification

**Steps of the test: Statistic Messages**

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

**Purpose**

The purpose of this test is to verify that your application can properly receive and process statistic messages.

Please assign a SenderComplID and make sure a valid contract is selected to start certifying a test.

Description	Flag	Status
1 A trade was sent. Please validate the following values.	●	Not Tested
2 A trade cancel was sent. Please validate the following values.	●	Not Tested
3 Electronic volume statistics were sent. Please validate the following values.	●	Not Tested
4 A trading session high price was sent. Please validate the following values.	●	Not Tested
5 A session low offer was sent. Please validate the following values.	●	Not Tested
6 A threshold limits were sent. Please validate the following values.	●	Not Tested
7 A settlement price was sent. Please validate the following values.	●	Not Tested

Key: ● not tested ● complete ● pending ● failed

REFRESH

## ▶ To run the Statistic Messages test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Enter the trade statistics that your application received.
  - tag 270-MDEntryPx
  - tag 271-MDEntrySize

Description	Flag	Status
<div style="border: 1px solid #ccc; padding: 5px;"> <p><b>A trade was sent. Please validate the following values.</b></p> <p>Instrument: 1EJH5 IsinCode: 998541</p> <p>MDEntryPx : <input style="width: 150px;" type="text"/></p> <p>MDEntrySize : <input style="width: 150px;" type="text"/></p> <p style="text-align: center;"><span style="background-color: #f4a460; padding: 2px 10px; border: 1px solid #ccc;">Submit</span></p> </div>	●	Pending

Click **Submit**.

4. Enter the trade cancel statistics that your application received:
  - tag 270-MDEntryPx
  - tag 271-MDEntrySize

2	<p>A trade cancel was sent. Please validate the following values.</p> <p>Instrument: 1EJZ4 IsinCode: 998531</p> <p>MDEntryPx : <input type="text"/></p> <p>MDEntrySize : <input type="text"/></p> <p><b>Submit</b></p>		Pending
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Click **Submit**.

5. Enter the tag 271-MDEntrySize value from the Electronic Volume statistics that your application received.

3	<p>Electronic volume statistics were sent. Please validate the following values.</p> <p>Instrument: 1EJZ4 IsinCode: 998531</p> <p>MDEntrySize : <input type="text"/></p> <p><b>Submit</b></p>		Pending
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Click **Submit**.

6. Enter the trading session high price (tag 270-MDEntryPx, when tag 269-MDEntry=7) that your application received.

4	<p>A trading session high price was sent. Please validate the following values.</p> <p>Instrument: 1EJH5 IsinCode: 998541</p> <p>MDEntryPx : <input type="text"/></p> <p><b>Submit</b></p>		Pending
---	--	---	---------

Click **Submit**.

7. Enter the trading session low price (tag 270-MDEntryPx, when tag 269-MDEntry=8) that your application received.

5	<p>A session low offer was sent. Please validate the following values.</p> <p>Instrument: 1EJH5 IsinCode: 998541</p> <p>MDEntryPx : <input type="text"/></p> <p><b>Submit</b></p>		Pending
---	---	---	---------

Click **Submit**.

8. Enter the following tag values from the statistic message that your application received:

- tag 1149-HighLimitPrice
- tag 1148-LowLimitPrice

6	<p>A threshold limits were sent. Please validate the following values.</p> <p>Instrument: 1ESZ4 SecurityID: 998121</p> <p>HighLimitPrice : <input type="text"/></p> <p>LowLimitPrice : <input type="text"/></p> <p><b>Submit</b></p>		Pending
---	--	---	---------

Click **Submit**.

9. Enter the following tag values for the settlement price that your application received.

- tag 270-MDEntryPx
- tag 731-SettlePriceType (choose one option below)
  - Final Actual Settlement at Trading Tick
  - Final Theoretical Settlement at Trading Tick
  - Preliminary Actual Settlement at Trading Tick
  - Preliminary Theoretical Settlement at Clearing Tick
  - Preliminary Theoretical Settlement at Trading Tick

7	A settlement price was sent. Please validate the following values. Instrument: 0GLBK8 SecurityID: 998350			Pending
	MDEntryPx :	<input type="text"/>		
	Settle Price Type :	Final Actual Settlement at Trading Tick		
	<input type="button" value="Submit"/>	Final Actual Settlement at Trading Tick		
		Final Theoretical Settlement at Trading Tick		
		Preliminary Actual Settlement at Trading Tick		
		Preliminary Theoretical Settlement at Clearing Tick		
		Preliminary Theoretical Settlement at Trading Tick		
<input type="button" value="REFRESH"/>				

Key:  not tested  complete  pending  failed

Click **Submit**.

## Market State Message

This test verifies that your application can properly receive and process market state information sent in [Market Data Security Status \(tag 35-MsgType=f\)](#) messages throughout a trading session.

Interview
Test Suite
Test Case
Post Certification

### Steps of the test: Market State Message

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

**Purpose**

The purpose of this test is to verify that your application can properly receive and process Market State Information throughout a trading session.

Please assign a SenderCompID and make sure a valid contract is selected to start certifying a test.

Description	Flag	Status
1	Your application will receive a Clear Statistics event.	<span style="color: green;">●</span> Complete
2	The market changed states. AutoCert+ prompts you to enter the current market state of your application.	<span style="color: yellow;">●</span> Pending
3	The market changed states. AutoCert+ prompts you to enter the current market state of your application.	<span style="color: gray;">●</span> Not Tested
4	The market changed states. Receive new market states message.	<span style="color: gray;">●</span> Not Tested
5	The market changed states. AutoCert+ prompts you to enter the current market state of your application.	<span style="color: gray;">●</span> Not Tested
6	The market changed states. Receive new market states message.	<span style="color: gray;">●</span> Not Tested
7	The market changed states. AutoCert+ prompts you to enter the current market state of your application.	<span style="color: gray;">●</span> Not Tested
8	The market changed states. Receive new market states message.	<span style="color: gray;">●</span> Not Tested
9	The market changed states. AutoCert+ prompts you to enter the current market state of your application.	<span style="color: gray;">●</span> Not Tested

Key: ● not tested ● complete ● pending ● failed

REFRESH

### ▶ To run the Market State Message test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Receive a Clear Statistics event (35=f, tag 1174-SecurityTradingEvent=4) message.
4. For the remaining steps of the test:

Select the current market state from the SecurityTradingStatus drop-down and click **Submit**:

- Implied OFF
- Pre-Open
- Trading Halt
- Close - Final
- Ready to Trade
- End of Session (Not Final Close)
- Opening (New Price Indication)
- No Cancel
- Implied ON

- Auction
- Pre-Open (No Cancel)

2	The market changed states. AutoCert+ prompts you to enter the current market state of your application.		
	Security Status : Implied OFF Pre-Open Trading Halt Close - Final Ready to Trade End of Session (Not Final Close) Opening (New Price Indication) No Cancel Implied ON Auction Pre-Open (No Cancel)	<input type="button" value="Submit"/>	Pending
3	The market change	enter the current market state of your application.	Not Tested
4	The market change	message.	Not Tested
5	The market change	enter the current market state of your application.	Not Tested

**OR**

Receive a new Market State (35=f) message.

# Complex Book Management

This test verifies that your application can properly receive and process complex deletions [[Market Data Incremental Refresh \(tag 35-MsgType=X\)](#)] such as Delete Thru and Delete From.

Interview
Test Suite
Test Case
Post Certification

### Steps of the test: Complex Book Management

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step1.

**Purpose**

The Purpose of this test is to verify that your application can properly receive and process complex deletions such as Delete Thru and Delete From.

**Selected Contract :** 1EJZ4,1EJH5,1EJZ4-1EJH5 - 644 Unlock

Category	IP	Port
Incremental Feed A	224.0.25.101	11644
Incremental Feed B	224.0.25.101	11744
Snapshot	224.0.25.127	19944
Instrument Replay	224.0.25.127	16644

**Note:** Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. START TEST

Description	Flag	Status
1 Confirm books are empty for selected instruments.	<input type="radio"/>	Not Tested
2 Confirm quantities and prices on the book for the selected instrument.	<input type="radio"/>	Not Tested
3 Confirm quantities and prices on the book for the selected instrument.	<input type="radio"/>	Not Tested

Key: ● not tested ● complete ● pending ● failed

REFRESH

## ▶ To run the Complex Book Management test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click **START TEST**.
3. Confirm that the books are empty for the selected instrument.  
Click **Yes** or **No**
4. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book.

2	<p>Confirm quantities and prices on the book for the selected instrument.</p> <p>Instrument: 1EJZ4 IsinCode: 998531</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid #ccc;">BuyPrice</th> <th style="text-align: left; border-bottom: 1px solid #ccc;">BuyQuantity</th> <th style="text-align: left; border-bottom: 1px solid #ccc;">SellPrice</th> <th style="text-align: left; border-bottom: 1px solid #ccc;">SellQuantity</th> </tr> </thead> <tbody> <tr> <td><input style="width: 100%;" type="text" value="0.0"/></td> <td><input style="width: 100%;" type="text" value="0"/></td> <td><input style="width: 100%;" type="text" value="0.0"/></td> <td><input style="width: 100%;" type="text" value="0"/></td> </tr> <tr> <td><input style="width: 100%;" type="text" value="0.0"/></td> <td><input style="width: 100%;" type="text" value="0"/></td> <td><input style="width: 100%;" type="text" value="0.0"/></td> <td><input style="width: 100%;" type="text" value="0"/></td> </tr> <tr> <td><input style="width: 100%;" type="text" value="0.0"/></td> <td><input style="width: 100%;" type="text" value="0"/></td> <td><input style="width: 100%;" type="text" value="0.0"/></td> <td><input style="width: 100%;" type="text" value="0"/></td> </tr> <tr> <td><input style="width: 100%;" type="text" value="0.0"/></td> <td><input style="width: 100%;" type="text" value="0"/></td> <td><input style="width: 100%;" type="text" value="0.0"/></td> <td><input style="width: 100%;" type="text" value="0"/></td> </tr> <tr> <td><input style="width: 100%;" type="text" value="0.0"/></td> <td><input style="width: 100%;" type="text" value="0"/></td> <td><input style="width: 100%;" type="text" value="0.0"/></td> <td><input style="width: 100%;" type="text" value="0"/></td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 10px;"><span style="background-color: #0070c0; color: white; padding: 5px 15px;">Submit</span></p>	BuyPrice	BuyQuantity	SellPrice	SellQuantity	<input style="width: 100%;" type="text" value="0.0"/>	<input style="width: 100%;" type="text" value="0"/>	<input style="width: 100%;" type="text" value="0.0"/>	<input style="width: 100%;" type="text" value="0"/>	<input style="width: 100%;" type="text" value="0.0"/>	<input style="width: 100%;" type="text" value="0"/>	<input style="width: 100%;" type="text" value="0.0"/>	<input style="width: 100%;" type="text" value="0"/>	<input style="width: 100%;" type="text" value="0.0"/>	<input style="width: 100%;" type="text" value="0"/>	<input style="width: 100%;" type="text" value="0.0"/>	<input style="width: 100%;" type="text" value="0"/>	<input style="width: 100%;" type="text" value="0.0"/>	<input style="width: 100%;" type="text" value="0"/>	<input style="width: 100%;" type="text" value="0.0"/>	<input style="width: 100%;" type="text" value="0"/>	<input style="width: 100%;" type="text" value="0.0"/>	<input style="width: 100%;" type="text" value="0"/>	<input style="width: 100%;" type="text" value="0.0"/>	<input style="width: 100%;" type="text" value="0"/>	<span style="color: yellow; font-size: 2em;">●</span>	Pending
BuyPrice	BuyQuantity	SellPrice	SellQuantity																								
<input style="width: 100%;" type="text" value="0.0"/>	<input style="width: 100%;" type="text" value="0"/>	<input style="width: 100%;" type="text" value="0.0"/>	<input style="width: 100%;" type="text" value="0"/>																								
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Click **Submit**.

5. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book.

3	Confirm quantities and prices on the book for the selected instrument.			
	Instrument: 1EJZ4 IsinCode: 998531			
	<b>BuyPrice</b>	<b>BuyQuantity</b>	<b>SellPrice</b>	<b>SellQuantity</b>
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>
	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>
<b>Submit</b>				
			 Pending	

Click **Submit**.