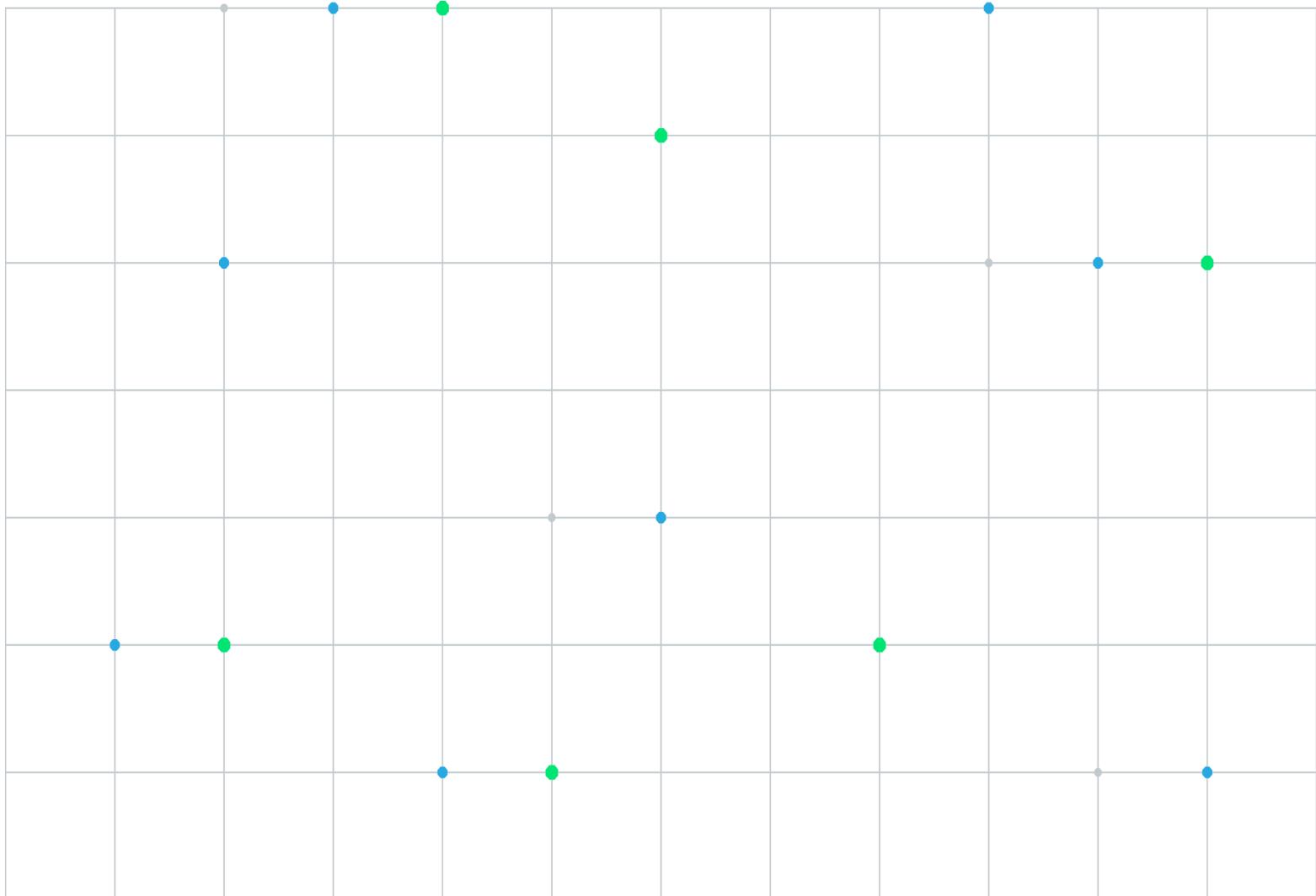


AutoCert+ Market Data Platform 3.0

User Manual

October 24, 2022



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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The information within this manual has been compiled by CME Group for general purposes only. CME Group assumes no responsibility for any errors or omissions. Additionally, all examples in this manual are hypothetical situations, used for explanation purposes only, and should not be considered investment advice or the results of actual market experience. All matters pertaining to rules and specifications herein are made subject to and are superseded by official CME, CBOT and NYMEX rules. Current rules should be consulted in all cases concerning contract specifications.

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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+ Market Data Platform 3.0 test suite.

► To run and navigate AutoCert+:

1. [Log into](#) the automated certification tool.
2. Review general AutoCert+ test suite [navigation](#) and [general interview](#) information.
3. Access the Market Data Platform 3.0 (MDP 3.0) test suite, by selecting the following settings on the **Current Testing Configuration** screen.
 - a. Company Profile: Select a *company profile*.
 - b. Market: Select **Futures & Options**
 - c. Purpose: Select **Market Data**.
 - d. Application System: Select a *test system*.
 - e. Test Suite: Select **MDP 3.0**.
 - f. Identifier: Select a product **Identifier** to use for market data message tests and click **Assign**.

Current Testing Configuration											
Tester:	Tom Tester		Type:	Semi-Automated Trading System							
Company Profile:	Trading Firm	▼	Category:	Prop System							
Market:	Futures & Options	▼	1603:	System 1							
Purpose:	Market Data		1604:	0.1							
Application System:	Trading System 1	▼	1605:	System 1							
Test Suite:	MDP 3.0										
NOTE: This test suite utilizes the CERT environment.											
Identifier:	EEEXBX	UNASSIGN	<table border="1" style="width: 100px; margin-left: 20px;"> <tr> <th colspan="2">Test Suite Status:</th> </tr> <tr> <td>Pre-Certification Interview:</td> <td>✓ Complete</td> </tr> <tr> <td>Test Suite Status:</td> <td>! Not Tested</td> </tr> </table>			Test Suite Status:		Pre-Certification Interview:	✓ Complete	Test Suite Status:	! Not Tested
Test Suite Status:											
Pre-Certification Interview:	✓ Complete										
Test Suite Status:	! Not Tested										

4. Complete the [Interview](#) for this test suite.
5. Complete applicable [test cases](#).
6. After certifying applicable test cases, complete the certification process from the [Post Certification](#) tab.

What's New

The list below illustrates the updates made to the AutoCert+ Market Data Platform 3.0 Help system.

Date	Topic	Description
24 Oct 2022	Format	Website and PDF format changes only.
16 Nov 2021	Interview	Updated interview screenshot.
27 Oct 2021	TCP Recovery	Added new chapter.
10 Oct 2019	Interview	Updated screenshot.
15 Nov 2018	Price Precision Adoption	Added new chapter.
10 Aug 2018	Complex Book Management	Updated screenshot and description.
26 Dec 2017		Rebranded from MDP3 with MBO.
22 Sep 2016		New version with Market by Order.

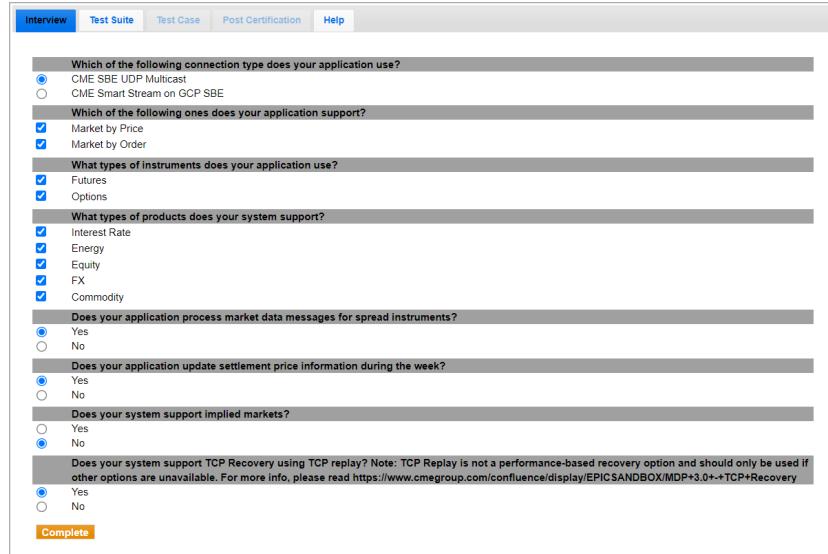
Interview

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.



The screenshot shows the 'Interview' tab selected in the top navigation bar. Below are several questions with dropdown menus and radio button groups:

- Which of the following connection type does your application use?
 - CME SBE UDP Multicast
 - CME Smart Stream on GCP SBE
- 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
- Does your system support TCP Recovery using TCP replay? Note: TCP Replay is not a performance-based recovery option and should only be used if other options are unavailable. For more info, please read <https://www.cmegroup.com/confluence/display/EPICSANDBOX/MDP+3.0+-+TCP+Recovery>
 - Yes
 - No

Complete

Certification Tests

This section contains information on the certification tests.

Security Definition Messages

This section contains information on the Security Definition message tests.

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.

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream on GCP SBE* connection types; from the [Interview](#).

Interview
Test Suite
Test Case
Post Certification
Help

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 step1.

Purpose	The purpose of this test is to verify that your application can properly receive and process Security Definition Messages.							
Selected Instrument(s): 0ERF5,0ERG5,0ERF5-0ERG5 - 901 Unlock								
Category	IP	Port						
Rendezvous End Point	69.50.112.254/32	N/A						
Incremental Feed A	224.0.25.1	17901						
Incremental Feed B	224.0.25.9	18901						
Snapshot MBP	224.0.25.126	19901						
Snapshot MBO	224.0.25.227	21901						
Instrument Replay	224.0.25.126	16901						
TCP Replay	69.50.112.189	9901						
Category	Link							
Templates File:	templates_FixBinary.xml							
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 Test Not Running						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Description</th> <th style="width: 40%;">Flag</th> <th style="width: 50%;">Status</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">1 Confirm that your application successfully received and processed the Future Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm</td> <td style="padding: 2px; text-align: center;"> </td> <td style="padding: 2px; text-align: center;">Not Tested</td> </tr> </tbody> </table>			Description	Flag	Status	1 Confirm that your application successfully received and processed the Future Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm		Not Tested
Description	Flag	Status						
1 Confirm that your application successfully received and processed the Future Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm		Not Tested						
Key: ● not tested ● complete ● pending ● failed								
(Test results will automatically refresh for up to 2 minutes).								

► To run the Security Definition Messages for Futures test:

1. From the **Instrument** drop-down, select the desired contract if not already locked.



Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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	<p>Confirm that your application successfully received and processed the Future 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>Submit</p>		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.

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream on GCP SBE* connection types; from the [Interview](#).

Interview
Test Suite
Test Case
Post Certification
Help

Steps of the test: Security Definition Messages For Futures 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 step1.

Purpose	The purpose of this test is to verify that your application can properly receive and process Security Definition Messages.																							
Selected Instrument(s): 0ERF5,0ERG5,0ERF5-0ERG5 - 901	Unlock																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Category</th> <th style="width: 40%;">IP</th> <th style="width: 30%;">Port</th> </tr> </thead> <tbody> <tr> <td>Rendezvous End Point</td> <td>69.50.112.254/32</td> <td>N/A</td> </tr> <tr> <td>Incremental Feed A</td> <td>224.0.25.1</td> <td>17901</td> </tr> <tr> <td>Incremental Feed B</td> <td>224.0.25.9</td> <td>18901</td> </tr> <tr> <td>Snapshot MBP</td> <td>224.0.25.126</td> <td>19901</td> </tr> <tr> <td>Snapshot MBO</td> <td>224.0.25.227</td> <td>21901</td> </tr> <tr> <td>Instrument Replay</td> <td>224.0.25.126</td> <td>16901</td> </tr> <tr> <td>TCP Replay</td> <td>69.50.112.189</td> <td>9901</td> </tr> </tbody> </table>	Category	IP	Port	Rendezvous End Point	69.50.112.254/32	N/A	Incremental Feed A	224.0.25.1	17901	Incremental Feed B	224.0.25.9	18901	Snapshot MBP	224.0.25.126	19901	Snapshot MBO	224.0.25.227	21901	Instrument Replay	224.0.25.126	16901	TCP Replay	69.50.112.189	9901
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Category	Link																							
Templates File:	templates_FixBinary.xml																							

Description		Flag	Status
1	Confirm that your application successfully received and processed the Future Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm		Not Tested
2	Confirm that your application successfully received and processed the Spread Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm		Not Tested

Key: not tested complete pending failed

(Test results will automatically refresh for up to 2 minutes).

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

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.



Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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	<p>Confirm that your application successfully received and processed the Future 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>Submit</p>		Pending

Click **Submit**.

4. 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	<p>Confirm that your application successfully received and processed the Spread Security Definition Message</p> <p>Instrument: 1EJZ4-1EJH5 IsinCode: 998571</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>Submit</p>		Pending
---	--	--	---------

5. Click **Submit**.

Security Definition Messages for Options

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

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream on GCP SBE* connection types; from the [Interview](#).

Interview
Test Suite
Test Case
Post Certification
Help

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 step1.

Purpose			
The purpose of this test is to verify that your application can properly receive and process Security Definition Messages.			
Selected Instrument(s): 0G2M3 C1300.0G2M3 P1050 - 906 Unlock			
Category	IP	Port	
Rendezvous End Point	69.50.112.254/32	N/A	
Incremental Feed A	233.158.8.164	17906	
Incremental Feed B	224.0.25.13	18906	
Snapshot MBP	233.158.8.164	19906	
Snapshot MBO	224.0.25.205	21906	
Instrument Replay	233.158.8.164	16906	
TCP Replay	69.50.112.189	9906	
Category	Link		
Templates File:		templates_FixBinary.xml	

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
Test Not Running

Description	Flag	Status
1 Confirm that your application successfully received and processed the Options Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm		Not Tested

Key: ● not tested ● complete ● pending ● failed

(Test results will automatically refresh for up to 2 minutes).

► To run the Security Definition Messages for Options test:

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.



Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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		Pending	
	Activation Date and Time :			
	Expiration Date and Time :			
	SecurityGroup :			
	MarketSegmentID :			
	StrikePrice :			
Submit				

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.

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream on GCP SBE* connection types; from the [Interview](#).

Interview	Test Suite	Test Case	Post Certification	Help																																																																				
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<table border="1"> <tr> <td>Category</td> <td>Link</td> </tr> <tr> <td>Templates File:</td> <td>templates_FixBinary.xml</td> </tr> </table>					Category	Link	Templates File:	templates_FixBinary.xml																																																																
Category	Link																																																																							
Templates File:	templates_FixBinary.xml																																																																							
<table border="1"> <tr> <th colspan="2">Description</th> <th>Flag</th> <th>Status</th> </tr> <tr> <td rowspan="2">1</td> <td>Confirm that your application successfully received and processed the Options Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm</td> <td rowspan="2"></td> <td rowspan="2">Not Tested</td> </tr> <tr> <td></td> </tr> <tr> <td rowspan="2">2</td> <td>Confirm that your application successfully received and processed the Spread Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm</td> <td rowspan="2"></td> <td rowspan="2">Not Tested</td> </tr> <tr> <td></td> </tr> </table>					Description		Flag	Status	1	Confirm that your application successfully received and processed the Options Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm		Not Tested		2	Confirm that your application successfully received and processed the Spread Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm		Not Tested																																																							
Description		Flag	Status																																																																					
1	Confirm that your application successfully received and processed the Options Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm		Not Tested																																																																					
2	Confirm that your application successfully received and processed the Spread Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm		Not Tested																																																																					
Key: not tested complete pending failed																																																																								
(Test results will automatically refresh for up to 2 minutes).																																																																								

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

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.

Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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 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"/> <input style="background-color: #f0a000; color: white; border: 1px solid #f0a000; padding: 2px 10px; border-radius: 5px; width: 100px; margin-top: 5px;" type="button" value="Submit"/>		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 Confirm that your application successfully received and processed the Spread Security Definition Message. Date/Time format should be entered as: YYYYMMDD hhmm Instrument UD:F\$ GN 0814993276 SecurityID: 993276 Activation Date and Time : <input type="text"/> Expiration Date and Time : <input type="text"/> SecurityGroup : <input type="text"/> MarketSegmentID : <input type="text"/> <input style="background-color: #f0a000; color: white; border: 1px solid #f0a000; padding: 2px 10px; border-radius: 5px; width: 100px; margin-top: 5px;" type="button" value="Submit"/>		Pending
--	--	----------------

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.

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream on GCP SBE* connection types; from the [Interview](#).

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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 step1.

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.

Instrument(s): 0G2M3 C1300,0G2M3 P1050 - 906 Select

Category	IP	Port
Rendezvous End Point	69.50.112.254/32	N/A
Incremental Feed A	233.158.8.164	17906
Incremental Feed B	224.0.25.13	18906
Snapshot MBP	233.158.8.164	19906
Snapshot MBO	224.0.25.205	21906
Instrument Replay	233.158.8.164	16906
TCP Replay	69.50.112.189	9906

Category Link
Templates File: [templates_FixBinary.xml](#)

Description	Flag	Status
1 Receive and process the Security Definition Delete message. Date/Time format should be entered as: YYYYMMDD hhmm	<input checked="" type="radio"/>	Not Tested

Key: ● not tested ● complete ● pending ● failed

(Test results will automatically refresh for up to 2 minutes).

► To run the UDS Instrument Deletion test:

1. From the **Instrument** 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
1 Receive and process the Security Definition Delete message. Date/Time format should be entered as: YYYYMMDD hhmm Instrument UD:B\$ VT 0811992698 SecurityID: 992698 SecurityGroup : <input type="text"/> Activation Date and Time : <input type="text"/>	●	Pending

Submit

4. 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.

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream on GCP SBE* connection types; from the [Interview](#).

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Steps of the test: Request For Quote 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 step1.

Purpose

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

Instrument(s):	0G2M3 C1300,0G2M3 P1050 - 906	Select
Category	IP	Port
Rendezvous End Point	69.50.112.254/32	N/A
Incremental Feed A	233.158.8.164	17906
Incremental Feed B	224.0.25.13	18906
Snapshot MBP	233.158.8.164	19906
Snapshot MBO	224.0.25.205	21906
Instrument Replay	233.158.8.164	16906
TCP Replay	69.50.112.189	9906
Category	Link	
Templates File:	templates_FixBinary.xml	

Description	Flag	Status
1 Confirm that your application successfully received and processed RFQ message.	<input type="radio"/>	Not Tested

(Test results will automatically refresh for up to 2 minutes).

Key: not tested complete pending failed

► To run the Request for Quote Message for Options Instruments test:

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.



Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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 Confirm that your application successfully received and processed RFQ message. OrderQty : <input type="text"/> Submit	<input type="radio"/>	Pending

4. Click **Submit**.

Book Management Messages

This section contains information on the book management tests.

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.

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream on GCP SBE* connection types; from the [Interview](#).

1. From the **Instrument** drop-down, select the desired contracts if the contracts are not already locked.



Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

2. Click **START TEST**.

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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.

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

Instrument(s):	0G2M3 C1300,0G2M3 P1050 - 906	Select
Category	IP	Port
Rendezvous End Point	69.50.112.254/32	N/A
Incremental Feed A	233.158.8.164	17906
Incremental Feed B	224.0.25.13	18906
Snapshot MBP	233.158.8.164	19906
Snapshot MBO	224.0.25.205	21906
Instrument Replay	233.158.8.164	16906
TCP Replay	69.50.112.189	9906
Category	Link	
Templates File:	templates_FixBinary.xml	

Description		Flag	Status
1	Confirm books are empty for selected instruments.	<input type="radio"/>	Not Tested
2	Receive a set of orders for the first instrument.	<input type="radio"/>	Not Tested
3	Receive cancellations for orders.	<input type="radio"/>	Not Tested
4	For each order, confirm the price and quantity by its priority in the book using the following instrument:	<input type="radio"/>	Not Tested

Key: not tested complete pending failed

(Test results will automatically refresh for up to 2 minutes).

► 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.

Confirm quantities and prices on the book for the first instrument (non implied).							
Instrument: 1EJZ4 IsinCode: 998531							
4	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="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							

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, then Click **Submit**.

Confirm quantities and prices on the book for the second instrument (non implied). Instrument: 0GEH5 IsinCode: 998480			
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
0.0	0	0.0	0
7			Pending

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.

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream* on *GCP SBE* connection types; from the [Interview](#).

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Steps of the test: Consolidated Book Management Messages for Market by Price (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 step1.

Purpose	The purpose of this test is to verify that your application can properly receive and process book management information for implied markets.		
Instrument(s):	0EDK7,0EDM7,0EDK7-0EDM7 - 901	Select	
Category		IP	Port
Rendezvous End Point		69.50.112.254/32	N/A
Incremental Feed A		224.0.25.1	17901
Incremental Feed B		224.0.25.9	18901
Snapshot MBP		224.0.25.126	19901
Snapshot MBO		224.0.25.227	21901
Instrument Replay		224.0.25.126	16901
TCP Replay		69.50.112.189	9901
Category		Link	
Templates File:	templates_FixBinary.xml		

Description		Flag	Status
1	Confirm books are empty for selected instruments.		Not Tested
2	Receive a set of orders for one of the selected instrument.		Not Tested
3	Receive cancellations for orders.		Not Tested
4	Confirm quantities and prices on the book for one of the selected instrument (including implied book).		Not Tested
5	Receive a set of orders one of the selected instrument.		Not Tested
6	Receive cancellations for orders.		Not Tested
7	Confirm quantities and prices on the book one of the selected instrument (including implied book).		Not Tested

not tested
 complete
 pending
 failed

(Test results will automatically refresh for up to 2 minutes).

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

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.

Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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).

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Click Submit.

7. Receive a set of orders for the selected instrument.
8. Receive cancellations for orders.
9. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the selected instrument (including implied book).

7	Confirm quantities and prices on the book one of the selected instrument (including implied book).					
	Instrument: 6EJZ4 IsinCode: 998536					
	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="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"/>						

10. Click Submit.

Book Management Messages for MBO

This test verifies that your application can properly receive and process market by order book management information.

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream* on *GCP SBE* connection types; from the [Interview](#).

► To run the Book Management Messages for Market by Order test:

1. From the **Instrument** drop-down, select the desired contracts if the contracts are not already locked.

1

Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

2. Click **START TEST**.

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 step 1.

Purposes

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

Instrument(s):		0G2M3 C1300,0G2M3 P1050 - 906	Select
Category		IP	Port
Rendezvous End Point		69.50.112.254/32	N/A
Incremental Feed A		233.158.8.164	17906
Incremental Feed B		224.0.25.13	18906
Snapshot MBP		233.158.8.164	19906
Snapshot MBO		224.0.25.205	21906
Instrument Replay		233.158.8.164	16906
TCP Replay		69.50.112.189	9906
Category	Templates File:	Link	
		templates_FixBinary.xml	

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	For each order, confirm the price and quantity by its priority in the book using the following instrument: Instrument : DZC N7 Security ID: 987060 <table border="1"> <thead> <tr> <th>BuyPrice</th> <th>BuyQuantity</th> <th>Sell Price</th> <th>Sell Quantity</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> </tbody> </table>	BuyPrice	BuyQuantity	Sell Price	Sell Quantity	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	Pending
BuyPrice	BuyQuantity	Sell Price	Sell Quantity																																											
0.0	0	0.0	0																																											
0.0	0	0.0	0																																											
0.0	0	0.0	0																																											
0.0	0	0.0	0																																											
0.0	0	0.0	0																																											
0.0	0	0.0	0																																											
0.0	0	0.0	0																																											
0.0	0	0.0	0																																											
0.0	0	0.0	0																																											
0.0	0	0.0	0																																											

(Test results will automatically refresh for up to 2 minutes).

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

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.

Purpose

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

Instrument(s):

0G2M3 C1300,0G2M3 P1050 - 906

[Select](#)

Category	IP	Port
Rendezvous End Point	69.50.112.254/32	N/A
Incremental Feed A	233.158.8.164	17906
Incremental Feed B	224.0.25.13	18906
Snapshot MBP	233.158.8.164	19906
Snapshot MBO	224.0.25.205	21906
Instrument Replay	233.158.8.164	16906
TCP Replay	69.50.112.189	9906

Category

Templates File:

Link

[templates_FixBinary.xml](#)

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	For each order, confirm the price and quantity by its priority in the book using the following instrument: Instrument : 0ZCN7 Security ID: 987060 <table border="1"><thead><tr><th>BuyPrice</th><th>BuyQuantity</th><th>Sell Price</th><th>Sell Quantity</th></tr></thead><tbody><tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr><tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr><tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr><tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr><tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr><tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr><tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr><tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr><tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr><tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr></tbody></table>	BuyPrice	BuyQuantity	Sell Price	Sell Quantity	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	●	Pending
BuyPrice	BuyQuantity	Sell Price	Sell Quantity																																												
0.0	0	0.0	0																																												
0.0	0	0.0	0																																												
0.0	0	0.0	0																																												
0.0	0	0.0	0																																												
0.0	0	0.0	0																																												
0.0	0	0.0	0																																												
0.0	0	0.0	0																																												
0.0	0	0.0	0																																												
0.0	0	0.0	0																																												
0.0	0	0.0	0																																												

[Submit](#)

Key: ● not tested ● complete ● pending ● failed

(Test results will automatically refresh for up to 2 minutes).

Click Yes or No.

4. Receive cancellations for orders.
5. Confirm quantities and prices in the proper book priority for one of the selected instruments.

Click Submit.

6. Receive additional book updates.
7. Confirm quantities and prices in the proper book priority for one of the selected instruments

Click Submit

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.

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream on GCP SBE* connection types; from the [Interview](#).

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Steps of the test: Implied Order Book Management for Market by Order Systems

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 implied markets.		
Instrument(s):	0EDX5,0EDZ5,0EDX5-0EDZ5 - 901	Select	
Category	IP	Port	
Rendezvous End Point	69.50.112.254/32	N/A	
Incremental Feed A	224.0.25.1	17901	
Incremental Feed B	224.0.25.9	18901	
Snapshot MBP	224.0.25.126	19901	
Snapshot MBO	224.0.25.227	21901	
Instrument Replay	224.0.25.126	16901	
TCP Replay	69.50.112.189	9901	
Category	Link		
Templates File:	templates_FixBinary.xml		

Description		Flag	Status
1	Confirm books are empty for selected instruments.	<input type="radio"/>	Not Tested
2	Receive a set of orders for one of the selected instrument.	<input type="radio"/>	Not Tested
3	For each order, confirm the price and quantity by its priority in the book using the following instrument:	<input type="radio"/>	Not Tested
4	Confirm the implied quantities and prices on the book for the same instrument.	<input type="radio"/>	Not Tested

Key: not tested complete pending failed

(Test results will automatically refresh for up to 2 minutes).

► To run the Implied Book Management Messages for MBO test:

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.



Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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, then enter the following values in the fields that appear:
 - Confirm *quantities* and *prices* in the proper book priority for one of the selected instruments.
 - Confirm the *implied quantities* and *prices* on the book for the same instrument.

Recovery

This section contains information on the recovery tests.

 **Note:** When *CME Smart Stream on GCP SBE* is selected from the [Interview](#), recovery test cases are excluded.

Recovery Test for Market by Price (Outright Only)

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

This test is available for *CME SBE UDP Multicast* connection type; from the [Interview](#).

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Steps of the test: Recovery Test for Market by Price (outrights only)

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.

Instrument(s):	0DEH5,0DEJ5,0DEH5-0DEJ5 - 902	Select
Category	IP	Port
Rendezvous End Point	69.50.112.254/32	N/A
Incremental Feed A	224.0.25.126	17902
Incremental Feed B	224.0.25.126	18902
Snapshot MBP	224.0.25.126	19902
Snapshot MBO	224.0.25.201	21902
Instrument Replay	224.0.25.126	16902
TCP Replay	69.50.112.189	9902
Category	Link	
Templates File:	templates_FixBinary.xml	

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

(Test results will automatically refresh for up to 2 minutes).

To run the Recovery (Outright Only) test:

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.



Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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	<p>Confirm quantities and prices on the book for the selected instrument (non implied). Instrument: 0ZCN7 SecurityID: 997060</p> <table border="1"> <thead> <tr> <th>BuyPrice</th> <th>BuyQuantity</th> <th>SellPrice</th> <th>SellQuantity</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> </tbody> </table> <p>Submit</p>	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	0.0	0	0.0	0	●	Pending
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																								
0.0	0	0.0	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 and prices on the book for the recovery instrument (non implied).	○	Not Tested																								

Key: ○ not tested ● complete ● yellow pending ● red 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)

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 (missing [market data for orders and cancels](#) or [security definition for the recovery](#)) from the system during a trading session, it will be necessary to perform recovery to update the books.

This test is available for *CME SBE UDP Multicast* connection type; from the [Interview](#).

Interview
Test Suite
Test Case
Post Certification
Help

Steps of the test: Consolidated Recovery Test for Market by Price (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 step1.

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.	

Instrument(s):	0EDX5,0EDZ5,0EDX5-0EDZ5 - 901	Select
Category	IP	Port
Rendezvous End Point	69.50.112.254/32	N/A
Incremental Feed A	224.0.25.1	17901
Incremental Feed B	224.0.25.9	18901
Snapshot MBP	224.0.25.126	19901
Snapshot MBO	224.0.25.227	21901
Instrument Replay	224.0.25.126	16901
TCP Replay	69.50.112.189	9901
Category	Link	
Templates File:	templates_FixBinary.xml	

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 (including implied book).	●	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 (including implied book).	●	Not Tested

● not tested ● complete ● pending ● failed

(Test results will automatically refresh for up to 2 minutes).

► **To run the Recovery (Implied) test:**

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.

Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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, then confirm the following:
 - Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the selected instrument, then click **Submit**.

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5	Confirm quantities and prices on the book for the selected instrument (including implied book). Instrument: 0EJU4 IsinCode: 998560 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">BuyPrice</th> <th style="width: 25%;">BuyQuantity</th> <th style="width: 25%;">SellPrice</th> <th style="width: 25%;">SellQuantity</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> </tbody> </table> <div style="text-align: center; margin-top: 5px;"> <input type="button" value="Submit"/> </div>				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	0.0	0	0.0	0	 Pending
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																										
0.0	0	0.0	0																										

7. Miss Security Definition message for the recovery instrument.
8. Receive market data for a set of orders for the recovery instrument.
 - Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the recovery instrument, then click **Submit**.

8	Confirm quantities and prices on the book for the recovery instrument (including implied book). Instrument: 0EJU4 IsinCode: 998560 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">BuyPrice</th> <th style="width: 25%;">BuyQuantity</th> <th style="width: 25%;">SellPrice</th> <th style="width: 25%;">SellQuantity</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> <tr><td>0.0</td><td>0</td><td>0.0</td><td>0</td></tr> </tbody> </table> <div style="text-align: center; margin-top: 5px;"> <input type="button" value="Submit"/> </div>				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	0.0	0	0.0	0	 Pending
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																										
0.0	0	0.0	0																										

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.

This test is available for *CME SBE UDP Multicast* connection type; from the [Interview](#).

Interview Test Suite **Test Case** Post Certification Help

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.

Instrument(s):	0G2M3 C1300,0G2M3 P1050 - 906	Select
Category	IP	Port
Rendezvous End Point	69.50.112.254/32	N/A
Incremental Feed A	233.158.8.164	17906
Incremental Feed B	224.0.25.13	18906
Snapshot MBP	233.158.8.164	19906
Snapshot MBO	224.0.25.205	21906
Instrument Replay	233.158.8.164	16906
TCP Replay	69.50.112.189	9906
Category	Link	
Templates File:	templates_FixBinary.xml	

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	For each order, confirm the price and quantity by its priority in the book using the following instrument:		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	For each order, confirm the price and quantity by its priority in the book using the following instrument:		Not Tested

Key: not tested complete pending failed

(Test results will automatically refresh for up to 2 minutes).

► To run the Recovery for Market by Order test:

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.



Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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.

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	Confirm quantities, prices and order priority on the book for the selected instruments. Instrument: OGLBZ6 SecurityID: 998170	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		
		0.0	0	0.0	0		
	Submit						
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, then 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.

This test is available for *CME SBE UDP Multicast* connection type; from the [Interview](#).

Interview Test Suite **Test Case** Post Certification Help

Steps of the test: Implied Recovery Test for Market by Order Systems

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 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.

Instrument(s):	0EDK7,0EDM7,0EDK7-0EDM7 - 901	Select																								
<table border="1"> <thead> <tr> <th>Category</th> <th>IP</th> <th>Port</th> </tr> </thead> <tbody> <tr> <td>Rendezvous End Point</td> <td>69.50.112.254/32</td> <td>N/A</td> </tr> <tr> <td>Incremental Feed A</td> <td>224.0.25.1</td> <td>17901</td> </tr> <tr> <td>Incremental Feed B</td> <td>224.0.25.9</td> <td>18901</td> </tr> <tr> <td>Snapshot MBP</td> <td>224.0.25.126</td> <td>19901</td> </tr> <tr> <td>Snapshot MBO</td> <td>224.0.25.227</td> <td>21901</td> </tr> <tr> <td>Instrument Replay</td> <td>224.0.25.126</td> <td>16901</td> </tr> <tr> <td>TCP Replay</td> <td>69.50.112.189</td> <td>9901</td> </tr> </tbody> </table>			Category	IP	Port	Rendezvous End Point	69.50.112.254/32	N/A	Incremental Feed A	224.0.25.1	17901	Incremental Feed B	224.0.25.9	18901	Snapshot MBP	224.0.25.126	19901	Snapshot MBO	224.0.25.227	21901	Instrument Replay	224.0.25.126	16901	TCP Replay	69.50.112.189	9901
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TCP Replay	69.50.112.189	9901																								
Category	Link																									
Templates File:	templates_FixBinary.xml																									

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 (including implied book).		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 (including implied book).		Not Tested

Key: not tested complete pending failed

(Test results will automatically refresh for up to 2 minutes).

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

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.



Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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.
8. Miss security definition message for the recovery instrument.

9. Receive market data for a set of orders for the recovery instrument.
10. Confirm implied quantities and prices on the book for the recovery instrument, then Click **Submit**.

TCP Replay Recovery

This test verifies that the application can perform a recovery via [TCP Replay Recovery](#).

This test is available for *CME SBE UDP Multicast* connection type; from the [Interview](#).

Interview	Test Suite	Test Case	Post Certification	Help																								
Steps of the test: TCP Replay Recovery																												
<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.</small>																												
Purpose <small>The purpose of this test is to verify that your application can perform recovery via TCP Replay.</small>																												
Instrument(s): 0G2M3 C1300,0G2M3 P1050 - 906 Select																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Category</th> <th style="width: 40%;">IP</th> <th style="width: 40%;">Port</th> </tr> </thead> <tbody> <tr> <td>Rendezvous End Point</td> <td>69.50.112.254/32</td> <td>N/A</td> </tr> <tr> <td>Incremental Feed A</td> <td>233.158.8.164</td> <td>17906</td> </tr> <tr> <td>Incremental Feed B</td> <td>224.0.25.13</td> <td>18906</td> </tr> <tr> <td>Snapshot MBP</td> <td>233.158.8.164</td> <td>19906</td> </tr> <tr> <td>Snapshot MBO</td> <td>224.0.25.205</td> <td>21906</td> </tr> <tr> <td>Instrument Replay</td> <td>233.158.8.164</td> <td>16906</td> </tr> <tr> <td>TCP Replay</td> <td>69.50.112.189</td> <td>9906</td> </tr> </tbody> </table>					Category	IP	Port	Rendezvous End Point	69.50.112.254/32	N/A	Incremental Feed A	233.158.8.164	17906	Incremental Feed B	224.0.25.13	18906	Snapshot MBP	233.158.8.164	19906	Snapshot MBO	224.0.25.205	21906	Instrument Replay	233.158.8.164	16906	TCP Replay	69.50.112.189	9906
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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Category</th> <th style="width: 80%;">Link</th> </tr> </thead> <tbody> <tr> <td>Templates File:</td> <td>templates_FixBinary.xml</td> </tr> </tbody> </table>					Category	Link	Templates File:	templates_FixBinary.xml																				
Category	Link																											
Templates File:	templates_FixBinary.xml																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Description</th> <th style="width: 15%;">Flag</th> <th style="width: 45%;">Status</th> </tr> </thead> <tbody> <tr> <td>1 AutoCert+ sends incremental updates then creates a gap to be recovered.</td> <td style="text-align: center;"><input type="radio"/></td> <td>Not Tested</td> </tr> <tr> <td>2 Establish a TCP connection and submit a Logon message. Was TCP connection established and logon message submitted successfully?</td> <td style="text-align: center;"><input type="radio"/></td> <td>Not Tested</td> </tr> <tr> <td>3 Receive a Logon Confirmation message. Was Logon confirmation message received?</td> <td style="text-align: center;"><input type="radio"/></td> <td>Not Tested</td> </tr> <tr> <td>4 Submit a Market Data Replay Request message.</td> <td style="text-align: center;"><input type="radio"/></td> <td>Not Tested</td> </tr> <tr> <td>5 Confirm that your application successfully received the Replay message that was requested in the Market Data Request Message.</td> <td style="text-align: center;"><input type="radio"/></td> <td>Not Tested</td> </tr> <tr> <td>6 Receive and process a Logout message.</td> <td style="text-align: center;"><input type="radio"/></td> <td>Not Tested</td> </tr> </tbody> </table>					Description	Flag	Status	1 AutoCert+ sends incremental updates then creates a gap to be recovered.	<input type="radio"/>	Not Tested	2 Establish a TCP connection and submit a Logon message. Was TCP connection established and logon message submitted successfully?	<input type="radio"/>	Not Tested	3 Receive a Logon Confirmation message. Was Logon confirmation message received?	<input type="radio"/>	Not Tested	4 Submit a Market Data Replay Request message.	<input type="radio"/>	Not Tested	5 Confirm that your application successfully received the Replay message that was requested in the Market Data Request Message.	<input type="radio"/>	Not Tested	6 Receive and process a Logout message.	<input type="radio"/>	Not Tested			
Description	Flag	Status																										
1 AutoCert+ sends incremental updates then creates a gap to be recovered.	<input type="radio"/>	Not Tested																										
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4 Submit a Market Data Replay Request message.	<input type="radio"/>	Not Tested																										
5 Confirm that your application successfully received the Replay message that was requested in the Market Data Request Message.	<input type="radio"/>	Not Tested																										
6 Receive and process a Logout message.	<input type="radio"/>	Not Tested																										
<small>Key: <input type="radio"/> not tested <input checked="" type="radio"/> complete <input type="radio"/> pending <input type="radio"/> failed</small> <small>(Test results will automatically refresh for up to 2 minutes).</small>																												

► To complete a TCP Replay Recovery test:

1. Select an **Identifier** and click **ASSIGN**.
2. Select an **Instrument(s)** if one is not already locked.
3. Select **START TEST**.
4. Receive incremental updates with a gap that needs to be recovered.
5. Select **Yes** or **No** to indicate whether a TCP connection was established and a [Logon](#) message was submitted successfully.
6. Select **Yes** or **No** to indicate whether a Logon confirmation message was received.
7. Submit a Market Data Replay Request (35=V) message.
8. Enter the tag 270-MDEntryPx value to confirm that your application successfully received the replayed message that was requested in the Market Data Replay Request (35=V) message.
9. Receive and process a Logout message.



Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

Channel Reset

This section contains information on the channel reset tests.

Channel Reset for Market by Price

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

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream on GCP SBE* connection types; from the [Interview](#).

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Test Suite
Test Case
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Help

Steps of the test: Channel Reset 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 channel reset messages.		
Instrument(s):	0G2M3 C1300,0G2M3 P1050 - 906	Select	
Category	IP	Port	
Rendezvous End Point	69.50.112.254/32	N/A	
Incremental Feed A	233.158.8.164	17906	
Incremental Feed B	224.0.25.13	18906	
Snapshot MBP	233.158.8.164	19906	
Snapshot MBO	224.0.25.205	21906	
Instrument Replay	233.158.8.164	16906	
TCP Replay	69.50.112.189	9906	
Category	Link		
Templates File:	templates_FixBinary.xml		

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

Key: not tested complete pending failed

(Test results will automatically refresh for up to 2 minutes).

► To run the Channel Reset test:

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.

i Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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
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="text" value="0.0"/>		<input type="text" value="0"/>		<input type="text" value="0.0"/>		<input type="text" value="0"/>			
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
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="text" value="0.0"/>		<input type="text" value="0"/>		<input type="text" value="0.0"/>		<input type="text" value="0"/>			
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.

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream on GCP SBE* connection types; from the [Interview](#).

Interview Test Suite **Test Case** Post Certification Help

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.

Instrument(s): 0G2M3 C1300,0G2M3 P1050 - 906 **Select**

Category	IP	Port
Rendezvous End Point	69.50.112.254/32	N/A
Incremental Feed A	233.158.8.164	17906
Incremental Feed B	224.0.25.13	18906
Snapshot MBP	233.158.8.164	19906
Snapshot MBO	224.0.25.205	21906
Instrument Replay	233.158.8.164	16906
TCP Replay	69.50.112.189	9906

Category	Link
Templates File:	templates_FixBinary.xml

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

(Test results will automatically refresh for up to 2 minutes).

► To run the Channel Reset for Market by Order test:

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.



Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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.

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.

Confirm quantities and prices for book and statistic messages for the selected instrument.					
Instrument: 0EJU4 IsinCode: 998560					
	BuyPrice	BuyQuantity	SellPrice	SellQuantity	
6	<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"/>	Pending
	<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"/>	
	Submit				

Statistic Messages

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

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream on GCP SBE* connection types; from the [Interview](#).

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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 step1.

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

Instrument(s):	0G2M3 C1300,0G2M3 P1050 - 906	Select	
Category		IP	Port
Rendezvous End Point		69.50.112.254/32	N/A
Incremental Feed A		233.158.8.164	17906
Incremental Feed B		224.0.25.13	18906
Snapshot MBP		233.158.8.164	19906
Snapshot MBO		224.0.25.205	21906
Instrument Replay		233.158.8.164	16906
TCP Replay		69.50.112.189	9906
Category		Link	
Templates File:		templates_FixBinary.xml	

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

(Test results will automatically refresh for up to 2 minutes).

► To run the Statistic Messages test:

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.

Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

2. Click **START TEST**.
3. Enter the trade statistics that your application received.
 - tag 270-MDEntryPx
 - tag 271-MDEntrySize

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Description		Flag	Status
1	<p>A trade was sent. Please validate the following values.</p> <p>Instrument: 1EJH5 IsinCode: 998541</p> <p>MDEntryPx : <input type="text"/></p> <p>MDEntrySize : <input type="text"/></p> <p>Submit</p>		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>Submit</p>		Pending
---	--	---	---------

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>Submit</p>		Pending
---	---	---	---------

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>Submit</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>Submit</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>Submit</p>	 Pending
---	--	---

Click **Submit**.

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

- tag 270-MDEntryPx
- tag 731-SettlPriceType (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	<p>A settlement price was sent. Please validate the following values.</p> <p>Instrument: 0GLBK8 SecurityID: 998350</p> <p>MDEntryPx : <input type="text"/></p> <p>Settle Price Type : <input style="width: 150px; height: 20px; border: 1px solid black; background-color: #f0f0f0; border-radius: 5px; padding: 2px 10px; font-size: 10px; font-weight: bold; margin-bottom: 5px;" type="button" value="Final Actual Settlement at Trading Tick"/></p> <p>Submit</p> <p>REFRESH</p>	 Pending
		<p>Key: ● not tested ● complete ● pending ● failed</p>

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.

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream on GCP SBE* connection types; from the [Interview](#).

Interview Test Suite **Test Case** Post Certification Help

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 step1.

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 review the online document for more info on security status tag usage:
<https://cmegroupclientsite.atlassian.net/wiki/spaces/EPICSANDBOX/pages/457223126/MDP+3.0+-+Security+Status>

Instrument(s):	0EDK7,0EDM7,0EDK7-0EDM7 - 901	Select
Category	IP	Port
Rendezvous End Point	69.50.112.254/32	N/A
Incremental Feed A	224.0.25.1	17901
Incremental Feed B	224.0.25.9	18901
Snapshot MBP	224.0.25.126	19901
Snapshot MBO	224.0.25.227	21901
Instrument Replay	224.0.25.126	16901
TCP Replay	69.50.112.189	9901
Category	Link	
Templates File:	templates_FixBinary.xml	

Description	Flag	Status
1 Your application will receive a Clear Statistics event.	●	Not Tested
2 The market changed states. AutoCert+ prompts you to enter the current market state of your application.	●	Not Tested
3 The market changed states. AutoCert+ prompts you to enter the current market state of your application.	●	Not Tested
4 The market changed states. Receive new market states message.	●	Not Tested
5 The market changed states. AutoCert+ prompts you to enter the current market state of your application.	●	Not Tested
6 The market changed states. Receive new market states message.	●	Not Tested
7 The market changed states. AutoCert+ prompts you to enter the current market state of your application.	●	Not Tested
8 The market changed states. Receive new market states message.	●	Not Tested
9 The market changed states. AutoCert+ prompts you to enter the current market state of your application.	●	Not Tested

Key: ● not tested ● complete ● pending ● failed

(Test results will automatically refresh for up to 2 minutes).

► 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 : 	 Pending
3	The market changed states. AutoCert+ prompts you to enter the current market state of your application.	 Not Tested
4	The market changed states. AutoCert+ prompts you to enter the current market state of your application.	 Not Tested
5	The market changed states. AutoCert+ prompts you to 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 a large event [[Market Data Incremental Refresh \(tag 35-MsgType=X\)](#)].

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream on GCP SBE* connection types; from the [Interview](#).

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Steps of the test: Complex Book Management - 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 your system application can properly receive and process a large event.		
Instrument(s):	0G2M3 C1300,0G2M3 P1050 - 906	Select	
Category	IP	Port	
Rendezvous End Point	69.50.112.254/32	N/A	
Incremental Feed A	233.158.8.164	17906	
Incremental Feed B	224.0.25.13	18906	
Snapshot MBP	233.158.8.164	19906	
Snapshot MBO	224.0.25.205	21906	
Instrument Replay	233.158.8.164	16906	
TCP Replay	69.50.112.189	9906	
Category	Link		
Templates File:	templates_FixBinary.xml		

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

Key: ● not tested ● complete ● pending ● failed

(Test results will automatically refresh for up to 2 minutes).

► To run the Complex Book Management test:

1. From the **Instrument** drop-down, select the desired contract if the contract is not already locked.



Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

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

<p>Confirm quantities and prices on the book for the selected instrument.</p> <p>Instrument: 1EJZ4 IsinCode: 998531</p> <table border="1"> <tr> <td>BuyPrice</td> <td>BuyQuantity</td> <td>SellPrice</td> <td>SellQuantity</td> </tr> <tr> <td>0.0</td> <td>0</td> <td>0.0</td> <td>0</td> </tr> <tr> <td colspan="4"> <input type="button" value="Submit"/> </td> </tr> </table>										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	0.0	0	0.0	0	<input type="button" value="Submit"/>			
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																																		
0.0	0	0.0	0																																		
<input type="button" value="Submit"/>																																					
3									Pending																												

Click **Submit**.

Price Precision Adoption

This test verifies that your application accurately interprets price precision at the 8 digit level.

This test is available for *CME SBE UDP Multicast* and *CME Smart Stream* on *GCP SBE* connection types; from the [Interview](#).

Interview	Test Suite	Test Case	Post Certification	Help																																													
<p>Steps of the test: Price Precision Adoption</p> <p>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> <p>Purpose The purpose of this test is to verify your system accurately interprets price precision at 8 digit level</p> <table border="1"> <tr> <td>Instrument(s):</td> <td>11EHV3,0ETK3 - 901</td> <td><input type="button" value="Select"/></td> </tr> <tr> <td>Category</td> <td>IP</td> <td>Port</td> </tr> <tr> <td>Rendezvous End Point</td> <td>69.50.112.254/32</td> <td>N/A</td> </tr> <tr> <td>Incremental Feed A</td> <td>224.0.25.1</td> <td>17901</td> </tr> <tr> <td>Incremental Feed B</td> <td>224.0.25.9</td> <td>18901</td> </tr> <tr> <td>Snapshot MBP</td> <td>224.0.25.126</td> <td>19901</td> </tr> <tr> <td>Snapshot MBO</td> <td>224.0.25.227</td> <td>21901</td> </tr> <tr> <td>Instrument Replay</td> <td>224.0.25.126</td> <td>16901</td> </tr> <tr> <td>TCP Replay</td> <td>69.50.112.189</td> <td>9901</td> </tr> <tr> <td>Category</td> <td colspan="2">Link</td> </tr> <tr> <td>Templates File:</td> <td colspan="2">templates_FixBinary.xml</td> </tr> </table> <table border="1"> <tr> <td colspan="2">Description</td> <td>Flag</td> <td>Status</td> </tr> <tr> <td>1</td> <td>Receive and process a market data trade message with 8 digit precision.</td> <td>●</td> <td>Not Tested</td> </tr> <tr> <td>2</td> <td>Do your downstream systems correctly process the expanded price precision?</td> <td>●</td> <td>Not Tested</td> </tr> </table> <p>Key: ● not tested ● complete ● pending ● failed</p> <p>(Test results will automatically refresh for up to 2 minutes).</p>					Instrument(s):	11EHV3,0ETK3 - 901	<input type="button" value="Select"/>	Category	IP	Port	Rendezvous End Point	69.50.112.254/32	N/A	Incremental Feed A	224.0.25.1	17901	Incremental Feed B	224.0.25.9	18901	Snapshot MBP	224.0.25.126	19901	Snapshot MBO	224.0.25.227	21901	Instrument Replay	224.0.25.126	16901	TCP Replay	69.50.112.189	9901	Category	Link		Templates File:	templates_FixBinary.xml		Description		Flag	Status	1	Receive and process a market data trade message with 8 digit precision.	●	Not Tested	2	Do your downstream systems correctly process the expanded price precision?	●	Not Tested
Instrument(s):	11EHV3,0ETK3 - 901	<input type="button" value="Select"/>																																															
Category	IP	Port																																															
Rendezvous End Point	69.50.112.254/32	N/A																																															
Incremental Feed A	224.0.25.1	17901																																															
Incremental Feed B	224.0.25.9	18901																																															
Snapshot MBP	224.0.25.126	19901																																															
Snapshot MBO	224.0.25.227	21901																																															
Instrument Replay	224.0.25.126	16901																																															
TCP Replay	69.50.112.189	9901																																															
Category	Link																																																
Templates File:	templates_FixBinary.xml																																																
Description		Flag	Status																																														
1	Receive and process a market data trade message with 8 digit precision.	●	Not Tested																																														
2	Do your downstream systems correctly process the expanded price precision?	●	Not Tested																																														

► To run the Price Precision Adoption test:

1. From the **Instrument** drop-down, select the desired contract, if the contract is not already locked.

Note: For futures and options, use the rendezvous point: 69.50.112.254/32.

2. Click **START TEST** to begin.



Note: DO NOT select the "START TEST" button once the test is in progress.

3. Enter the tag 270-MDEntryPx value that your application received.

1	Receive and process a market data trade message with 8 digit precision. Instrument: 6WSV8 SecurityID: 997756 MDEntryPx: <input type="text"/>		Pending
---	--	---	---------

Click **Submit**.

4. Select **Yes** or **No** to indicate whether or not your application correctly processed the expanded price precision.