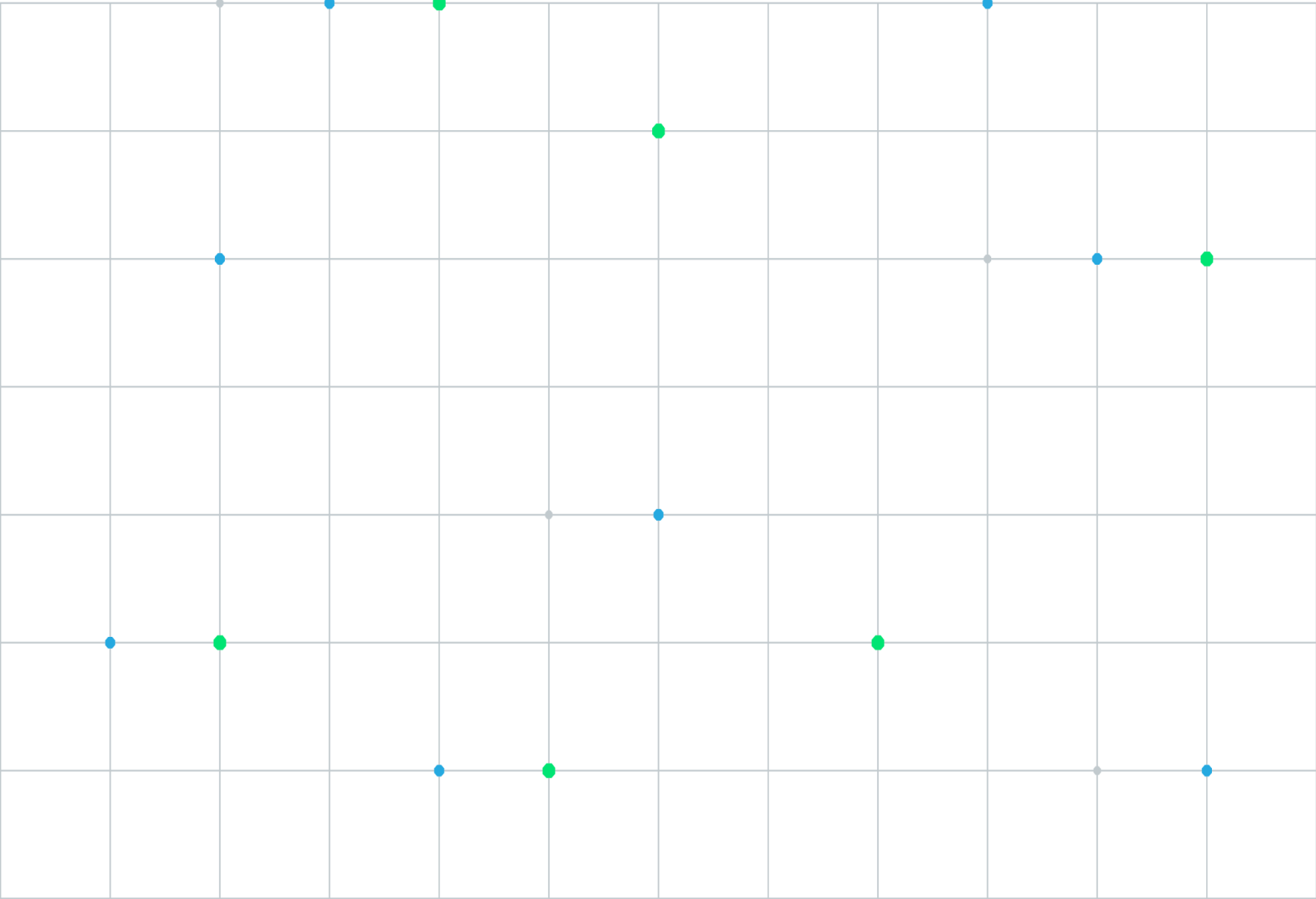


AutoCert+ CME Benchmark Administration Premium User Manual

January 23, 2024



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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+ CME Benchmark Administration Premium test suite. CME Benchmark Administration Premium is a Simple Binary Encoded (SBE) market data topic on CME Smart Stream on Google Cloud Platform (GCP) for:

- CME Term SOFR Reference Rates
- Petroleum Indexes
- CVOL Indexes
- RFR Benchmarks

▶ To use AutoCert+ and select a Test Suite:

1. [Log into](#) the automated certification tool.
2. Review general AutoCert+ test suite [navigation](#) and [general interview](#) information.
3. Navigate to the AutoCert+ CME Benchmark Administration Premium test suite.

Identifier:	<input type="text" value="Select Identifier"/>	<input type="button" value="ASSIGN"/>
-------------	--	---------------------------------------

- a. Select a **Company Name**.
- b. For **Market**, select *Futures and Options*.
- c. For **Purpose**, select *Streamlined*.
- d. Select an **Application System**.
- e. For **Test Suite**, select *CME Benchmark Administration Premium*.

Current Testing Configuration	
Tester:	Tom Tester
Company Name:	<input type="text" value="Test"/>
Market:	<input type="text" value="Futures & Options"/>
Purpose:	<input type="text" value="Streamlined"/>
Application System:	<input type="text" value="Test"/>
Test Suite:	<input type="text" value="CME Benchmark Administration Premium"/>
NOTE: This test suite utilizes the NEWRELEASE environment.	
Identifier:	<input type="text" value="Select Identifier"/> <input type="button" value="ASSIGN"/>
Type:	Automated Trading System
Category:	Prop System
1603:	Test
1604:	1
1605:	1
Test Suite Status:	
Pre-Certification Interview:	Not Started
Test Suite Status:	Not Started

4. Select a **Identifier** and select **ASSIGN**.
5. Complete the [Interview](#) for this test suite.
6. Complete applicable test cases.

Interview

Test Suite

Test Case

Post Certification

Help

CME Benchmark Administration Premium Certification Tests	Retest	Flag	Status	Mandatory/Optional
CME Benchmark Administration Premium Incremental Message for Index Pricing			Not Tested	Mandatory
CME Benchmark Administration Premium Incremental Message for CVOL			Not Tested	Mandatory
TCP Replay Recovery			Not Tested	Mandatory
CME Benchmark Administration Premium Incremental Message for RepoFunds Rate (RFR) Benchmarks			Not Tested	Mandatory

REFRESH

Key:

not tested
complete
pending
failed

7. Complete the certification process from the [Post Certification](#) tab.

What's New

The list below illustrates the updates made to the AutoCert+ CME Benchmark Administration Premium Help system.

Date	Topic	Description
January 23, 2024	Incremental Message for RepoFunds Rate Benchmark	Repo Funds Rate Benchmark instrument tests added
January 23, 2024	Interview	Added questions for RFR benchmark tests
October 25, 2022	Format	Website and PDF format changes only.
April 29, 2022	Interview	Updated for new CVOL test case
	Incremental Message for CVOL	New test case
August 30, 2021	Interview	Updated for new index pricing test case.
	Incremental Message for Index Pricing	Added new topic.
June 4, 2021		Initial publication.

Interview

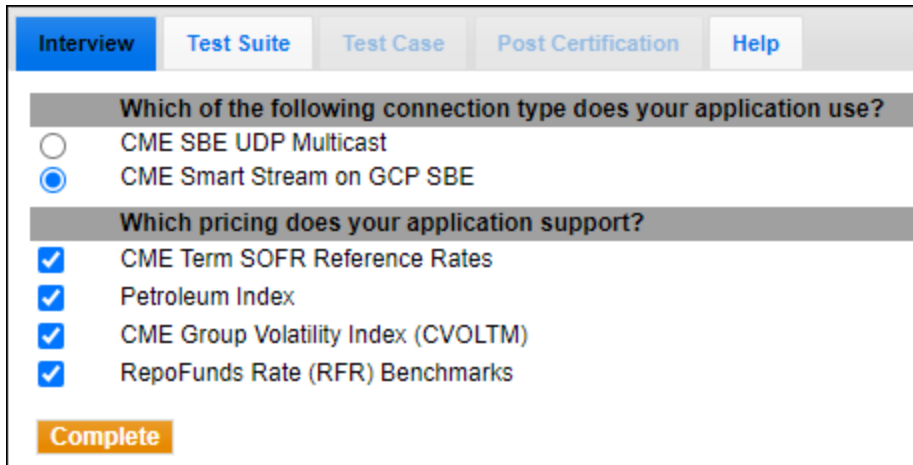
Based on your response, certain tests are required and others are optional. Before running the test cases, the pre-certification interview must be completed.

▶ To complete the interview:

1. Select an **Identifier** from the drop-down and select **ASSIGN**.



2. Answer each question and select **Complete**.



CME Benchmark Administration Premium Incremental Message for Index Pricing

The purpose of this test is to verify that your application can properly receive and process CME Benchmark Administration Premium Market Data Incremental Refresh (tag 35-MsgType=X) messages for index pricing.

Note: See also:
[- CME Group Benchmark Administration](#)
[- CME Benchmark Administration Premium Message Specification](#)

Prior to beginning the test, select:

1. From the Testing Configuration screen, select an **Identifier**, then select **Assign**.
2. On the selected Test Case screen, select an **Instrument**, then select **START TEST**.

▶ To run a CME Benchmark Administration Premium Incremental Message for Index Pricing test:

AutoCert+ sends an index price, enter the following [tag values](#) to confirm your system received an index price:

- tag 269-MDEntryType
- tag 270-MDEntryPx
- tag 9732-FormattedLastPx

Interview

Test Suite

Test Case

Post Certification

Help

Steps of the test: CME Benchmark Administration Premium Incremental Message for Index Pricing

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 CME Benchmark Administration Premium incremental messages (tag 35-MsgType=X).

Selected Instrument(s):

Unlock

Category	Value
Encryption	Google-managed
Incremental Topic Id	NR. [REDACTED]
Incremental Topic Name	projects/cmegroup-marketdata-newrel/topics/NR. [REDACTED]
Snapshot MBP Topic Id	NR. [REDACTED]
Snapshot MBP Topic Name	projects/cmegroup-marketdata-newrel/topics/NR. [REDACTED]
Snapshot MBO Topic Id	NR. [REDACTED]
Snapshot MBO Topic Name	projects/cmegroup-marketdata-newrel/topics/NR. [REDACTED]
Instrument Replay Topic Id	NR.SSCL. [REDACTED]
Instrument Replay Topic Name	projects/cmegroup-marketdata-newrel/topics/NR. [REDACTED]

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
<div><div>1</div><div>An Index price was sent. Please validate the following values.<div><div>MDEntryType :</div><div>MDEntryPx :</div><div>ForamttdLastPx :</div></div><div>Submit</div></div></div> <div><div></div><div>Pending</div></div>	<div></div>	<div>Pending</div>

Key:

not tested

complete

pending

failed

REFRESH

CME Benchmark Administration Premium Incremental Mes- sage for CVOL

The purpose of this test is to verify that your application can properly receive and process CME Benchmark Administration Premium incremental messages (tag 35-MsgType=X) for CME Group Volatility Index ([CVOL™](#)).

i

Note: See also:

- [CME Group Benchmark Administration](#)

- [CME Benchmark Administration Premium Message Specification](#)

Prior to beginning the test, select:

- From the Testing Configuration screen, select an **Identifier**, then select **Assign**.
- On the selected Test Case screen, select an **Instrument**, then select **START TEST**.

▶ **To run a CME Benchmark Administration Premium Incremental Message (for CVOL) test:**

AutoCert+ sends a CVOL price. Validate the following [values](#) for the first repeating group received.

- tag 269-MDEntryType
- tag 270-MDEntryPx
- Select an applicable tag 286-OpenCloseSettlFlag:
 - 107=Real Time
 - 108=Final Daily
 - 109=Preliminary Daily
 - 110=Reprint Previous

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Steps of the test: CME Benchmark Administration Premium Incremental Message for CVOL

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 CME Benchmark Administration Premium incremental messages (tag 35-MsgType=X).

Selected Instrument(s): **Unlock**

Category	IP	Port
Incremental Feed A	10.10.10.10	10001
Incremental Feed B	10.10.10.10	10002
Snapshot MBP	NA	NA
Snapshot MBO	NA	NA
TCP Replay	10.10.10.10	10003

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 A CVOL price was sent. Please validate the following values for the first repeating group received. MDEntryType : <input type="text"/> MDEntryPx : <input type="text"/> OpenCloseSettlFlag : <input type="text" value="Reprint Previous"/> <input type="button" value="Submit"/>		Pending

Key: not tested complete pending failed

REFRESH

TCP Replay Recovery

The purpose of this test is to verify that your application can perform recovery via TCP Replay.

Note: See also:
[- CME Group Benchmark Administration](#)
[- MDP 3.0 - TCP Recovery](#)

Prior to beginning the test, select:

1. From the Testing Configuration screen, select an **Identifier**, then select **Assign**.
2. On the selected Test Case screen, select an **Instrument**, then select **START TEST**.

► **To run a TCP Replay Recovery test:**

1. AutoCert+ sends incremental updates then creates a gap to be recovered.
2. Establish a TCP connection and submit a [Logon](#) (tag 35-MsgType=A) message.
(If applicable) Respond to the question by selecting *Yes / No* - Was the TCP connection established and logon message submitted successfully?
3. Receive a [Logon confirmation](#) message.
(If applicable) Respond to the question by selecting *Yes / No* - Was a Logon confirmation message received?
4. Submit a [Market Data Replay Request](#) (tag 35-MsgType=V) message.
5. Confirm that your application successfully received the [Replay](#) message that was requested in the Market Data Request Message, by entering the following tag values:
 - tag 270-MDEntryPx
 - tag 9732-FormattedLastPx
6. Receive and process a [Logout](#) (tag 35-MsgType=5) message.

[Interview](#)
[Test Suite](#)
[Test Case](#)
[Post Certification](#)
[Help](#)

Steps of the test: TCP Replay Recovery

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 recovery via TCP Replay.

Selected Instrument(s): Unlock

Category	IP	Port
Incremental Feed A	100.115.128.100	40001
Incremental Feed B	100.115.128.101	40002
Snapshot MBP	NA	NA
Snapshot MBO	NA	NA
TCP Replay	100.115.128.100	40001

Category	Link
Templates File:	templates_FixBinary.xml
Global TCP Recovery Schema:	Tcprecovery.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 AutoCert+ sends incremental updates then creates a gap to be recovered.		Not Tested
2 Establish a TCP connection and submit a Logon message. Was TCP connection established and logon message submitted successfully?		Not Tested
3 Receive a Logon Confirmation message. Was Logon confirmation message received?		Not Tested
4 Submit a Market Data Replay Request message.		Not Tested
5 Confirm that your application successfully received the Replay message that was requested in the Market Data Request Message.		Not Tested
6 Receive and process a Logout message.		Not Tested

REFRESH

Key: not tested complete pending failed

Incremental Message for RepoFunds Rate (RFR) Benchmarks

The purpose of this test is to verify that your application can properly receive and process CME Benchmark Administration Premium incremental messages (tag 35-MsgType=X).

**Note:** See also:

- [CME Group Benchmark Administration](#)
- [CME Benchmark Administration Premium Message Specification](#)

Prior to beginning the test, select:

1. From the Testing Configuration screen, select an **Identifier**, then select **Assign**.
2. On the selected Test Case screen, select an **Instrument**, then select **START TEST**.



To run the Incremental message for RepoFunds Rate benchmark test:

AutoCert+ sends a RFR Benchmark price. Validate the following [values](#) for the first repeating group received.

- tag 269-MDEntryType
- tag 270-MDEntryPx

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Steps of the test: CME Benchmark Administration Premium Incremental Message for RepoFunds Rate (RFR) Benchmarks

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 CME Benchmark Administration Premium incremental messages (tag 35-MsgType=X)

Selected Instrument(s): **Unlock**

Category	IP	Port
Incremental Feed A	128.128.128.128	12345
Incremental Feed B	128.128.128.128	12345
Snapshot MBP	NA	NA
Snapshot MBO	NA	NA
TCP Replay	128.128.128.128	12345

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 <div> A RFR Benchmark price was sent. Please validate the following values for the first repeating group received. MDEntryType : <input type="text"/> MDEntryPx : <input type="text"/> Submit </div>		Pending

Key: not tested complete pending failed

REFRESH