CME Group

AutoCert+ EBS Direct 2.0 - Taker API User Manual

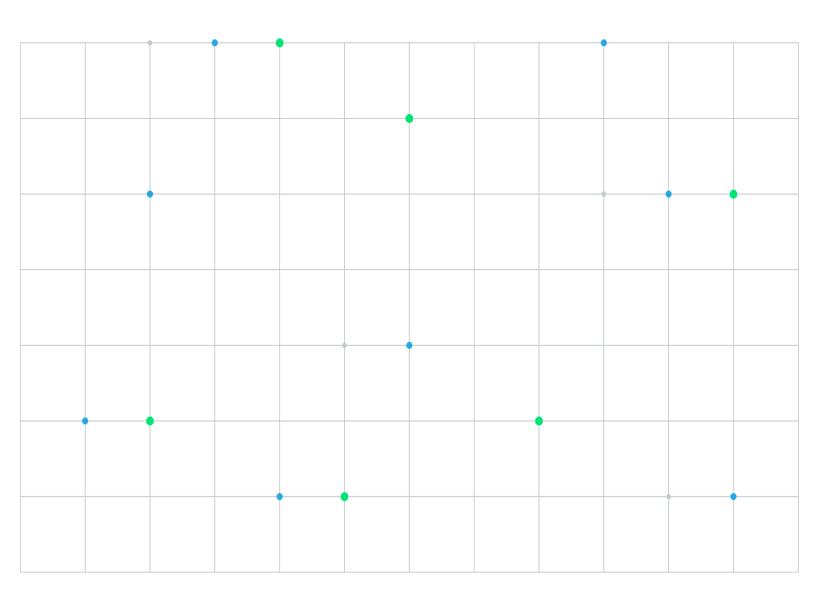February 7, 2023

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Disclaimer

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.

Certification session details will be assigned and forwarded to the customer, including certification target locations and firm / user Identifiers.

This Help system accompanies the AutoCert+ EBS Direct 2.0 - Taker API test suite.
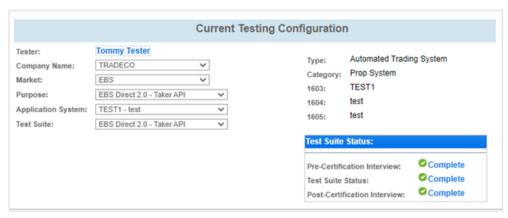
> ⓘ   For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷   **To run and navigate AutoCert+:**

1. Log into the automated certification tool.

2. Review general AutoCert+ test suite navigation and general interview information.

3. Navigate to the AutoCert+ EBS Direct 2.0 - Taker API test suite.

   a. Select a *Company Name*.

   b. For **Market**, select *EBS*.

   c. For **Purpose**, select *EBS Direct 2.0 - Taker API*.

   d. Select an *Application System*.

   e. For **Test Suite**, select *EBS Direct 2.0 - Taker API*.

4. (if applicable) Select a **Identifier** and select **ASSIGN**.

5. Complete the Interview for this test suite.

   Available test cases are determined by interview question responses.

6. Complete applicable test cases.

7. Complete the certification process from the Post Certification tab.

What's New

The list below illustrates the updates made to the AutoCert+ EBS Direct 2.0 - Taker API Help system.

Date	Topic	Description
February 7, 2023	All	Initial release
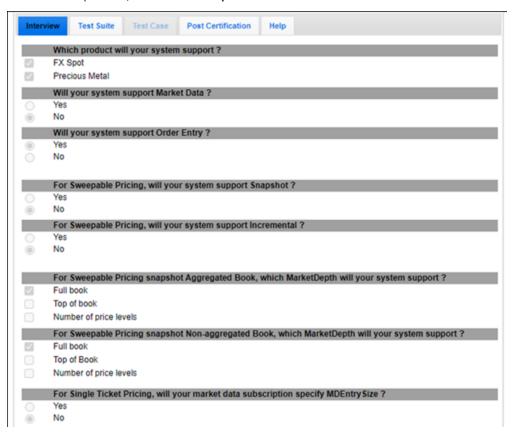
Interview

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, then select **Complete** when finished.

For Single Ticket Pricing, which MarketDepth will your system support ?

- ☑ Full book
- ☐ Top of book
- ☐ Number of price levels

For Single Ticket Pricing, will your system support Market Data Request to unsubscribe ?

- ○ Yes
- ◉ No

Which Order Entry model will your system support ?

- ☑ Pass-Through model
- ☐ ECN Model

For Order Entry, will your system support trading on Sweepable Pricing ?

- ○ Yes
- ◉ No

For Order Entry, will your system support trading on Single Ticket Pricing ?

- ○ Yes
- ◉ No

Will your system support Day Order ?

- ○ Yes
- ◉ No

Will your system support Good Till Cancel (GTC) Order ?

- ○ Yes
- ◉ No

Will your system support Order Cancellation ?

- ○ Yes
- ◉ No

Will your system support Order Status functionality ?

- ○ Yes
- ◉ No

Cancel On Disconnect - EBS will cancel all open orders in the event of a disconnection. Taking an STP feed will ensure that you receive details of any fills missed during your downtime. Alternatively clients can verify the status of their orders by way of sending Order Status requests.

- ◉ Acknowledge
- ○ Not Acknowledge

Market Data Request ID (Tag 262-MDReqID) and Client Order ID (Tag 11-ClOrdID) have maximum length of 40 characters and sending greater than the maximum length will be rejected. Please acknowledge your system will not sent ID greater than maximum length of 40 characters.

- ◉ Acknowledge
- ○ Not Acknowledge

EBS 2.0 Taker API Tests

This section contains information on the EBS Direct 2.0 Taker API tests.

Market Data Session Logon Test / Order Session Logon Test

The purpose of this test is to verify that the client system can connect to EBS with ResetSeqNumFlag = Y on every Logon to force a session reset.

> ⓘ   For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

   > ⓘ   **Note**:DO NOT select the START TEST button once the test is in progress.
   > If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

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

Steps of the test: Market Data Session Logon Test

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 the client system can connect to EBS with ResetSeqNumFlag = Y on every Logon to force a session reset.

	Description	Flag	Status
1	Over the Market Data session, submit a Logon message.	⚪	Not Tested
2	Receive and process a Logon acknowledgement message.	⚪	Not Tested

Key: ⚪ not tested 🟢 complete 🟡 pending 🔴 failed

> ⓘ   **Note**: This test is used for both *Market Data*Market Data Session Logon Test or *Order Session*Order Session Logon Test formats. The above image shows the Market Data format version of the test.

View Order Session test screen

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

Steps of the test: Order Session Logon Test

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 the client system can connect to EBS with ResetSeqNumFlag = Y on every Logon to force a session reset.

	Description	Flag	Status
1	Over the Order session, submit a Logon message.	⚪	Not Tested
2	Receive and process a Logon acknowledgement message.	⚪	Not Tested

Key: ⚪ not tested 🟢 complete 🟡 pending 🔴 failed

▷ **To run a Market Data Session Logon Test *or* Order Session Logon test:**

1. Over the Market Data *or* Order Session, submit a Logon (35=A) message.

2. Receive and process a Logon acknowledgment message.

Market Data Session Re-connection Interval Test / Order Session Re-connection Interval Test

The purpose of this test is to verify that the client system waited before attempt to Logon following an unsuccessful Logon attempt.

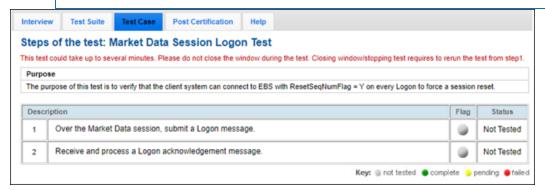> ℹ️   For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> ℹ️   **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

> ℹ️   **Note**: This test is used for both *Market DataMarket Data Session Re-connection Interval Test* or *Order SessionOrder Session Re-connection Interval Test* formats. The above image shows the Market Data format version of the test.

View Order Session test screen

To run a Market Data *or* Order Session Re-connection Interval Test:

1. Over the Market Data *or* Order session, submit a Logon (35=A) message.

2. Receive and process a Logout (35=5) message.

3. After the reconnection time interval, submit a Logon (35=A) message.

4. Receive and process a Logon acknowledgment message.

Market Data Session Verify Test Request Procedure / Methodology - Order Session Verify Test Request Procedure / Methodology

The purpose of this test is to verify that the client system reacts correctly in case of an interruption of communication with EBS.

> ⓘ For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)
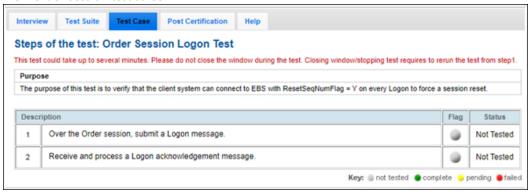
To select the Test:

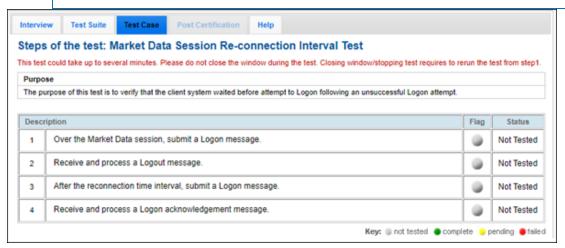1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> ⓘ **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

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

Steps of the test: Market Data Session Verify Test Request Procedure/Methodology

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 the client system reacts correctly in case of an interruption of communication with EBS.

	Description	Flag	Status
1	Over the Market Data session, submit a Heartbeat message.	⬤	Not Tested
2	Receive and process a Heartbeat message.	⬤	Not Tested
3	Submit a Heartbeat message.	⬤	Not Tested
4	Receive and process a Test Request message.	⬤	Not Tested
5	Submit a Heartbeat message in respond to the received Test Request message.	⬤	Not Tested
6	Submit a Test Request message.	⬤	Not Tested
7	Due to heartbeat timeout, submit a Logout message or disconnect the session.	⬤	Not Tested

Key: ⬤ not tested ● complete ● pending ● failed

ℹ **Note**: This test is used for both *Market DataMarket Data Session Re-connection Interval Test or Order SessionMarket Data Session Verify Test Request Procedure / Methodology* formats. The above image shows the Market Data format version of the test.

▷ **To run a Market Data *or* Order Session Verify Test Request Procedure / Methodology:**

1. Over the Market Data session, submit a Heartbeat (35=0) message.

2. Receive and process a Heartbeat message.

3. Submit a Heartbeat (35=0) message.

4. Receive and process a Test Request (35=1) message.

5. Submit a Heartbeat (35=0) message in respond to the received Test Request message.

6. Submit a Test Request (35=1) message.

7. Due to the heartbeat timeout, submit a Logout (35=5) message or disconnect the session.

View Order Session test screen

Steps of the test: Order Session Verify Test Request Procedure/Methodology

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 the client system reacts correctly in case of an interruption of communication with EBS.		

	Description	Flag	Status
1	Over the Order session, submit a Heartbeat message.	⬤	Not Tested
2	Receive and process a Heartbeat message.	⬤	Not Tested
3	Submit a Heartbeat message.	⬤	Not Tested
4	Receive and process a Test Request message.	⬤	Not Tested
5	Submit a Heartbeat message in respond to the received Test Request message.	⬤	Not Tested
6	Submit a Test Request message.	⬤	Not Tested
7	Due to heartbeat timeout, submit a Logout message or disconnect the session.	⬤	Not Tested

Key: ⬤ not tested ● complete ● pending ● failed

Market Data / Order Session Disconnection Tests

The purpose of this test is to verify that the client system reacts correctly in case of hard *or* graceful disconnection with EBS.
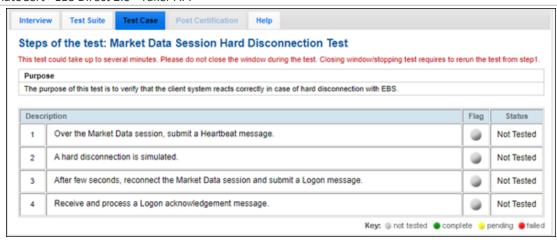
> ℹ️   For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.
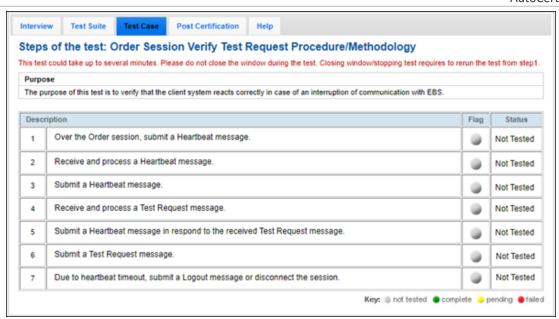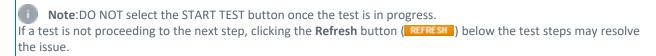
3. Click the **START TEST** button.

> ℹ️   **Note:**DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.
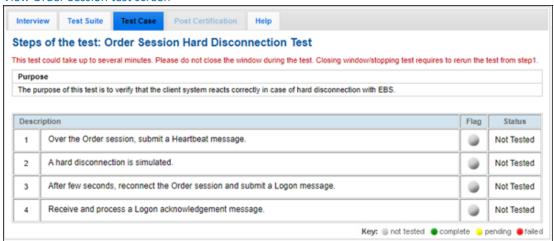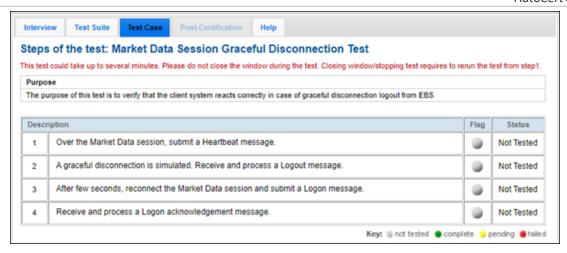
AutoCert+ EBS Direct 2.0 - Taker API

> **Note**: This test is used for both *Market Data*Market Data Session Hard Disconnection Test or *Order Session*Order Session Hard Disconnection Test formats. The above image shows the Market Data format version of the test.

▶ **To run a Market Data Session Hard Disconnection Test *or* Order Session Hard Disconnection Test**

1. Over the Market Data session, submit a Heartbeat (35=0) message.

   A hard disconnection is simulated.

2. After a few seconds, reconnect the Market Data session and submit a Logon (35=A) message.

3. Receive and process a Logon acknowledgment message.

View Order Session test screen

▶ **To run a Market Data Session Graceful Disconnection Test *or* Order Session Graceful Disconnection Test**

> **Note**: This test is used for both *Market Data*Market Data Session Graceful Disconnection Test or *Order Session*Order Session Graceful Disconnection Test formats. The above image shows the Market Data format version of the test.

1. Over the Market Data session, submit a Heartbeat (35=0) message.
2. A graceful disconnection is simulated. Receive and process a Logout (35=5) message.
3. After few seconds, reconnect the Market Data session and submit a Logon (35=A) message.
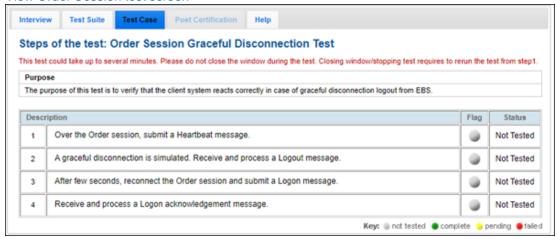4. Receive and process a Logon acknowledgment message.

View Order Session test screen

Market Data Session / Order Session Logout Test

The purpose of this test is to verify that the client system logout with good practice.

> For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)
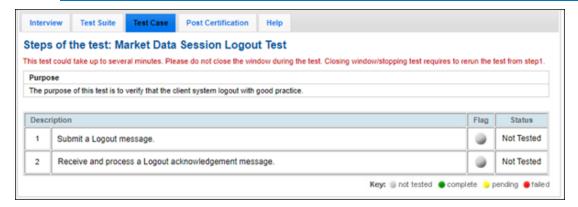
▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.
2. From the **Test Suite** tab, select the linked test.
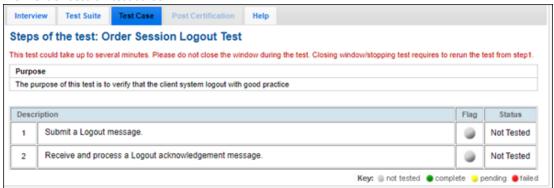
3. Click the **START TEST** button.

> **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

> **Note**: This test is used for both *Market Data*Market Data Session Logout Test or *Order Session*Order Session Logout Test formats. The above image shows the Market Data format version of the test.

View Order Session test screen

▷ **To run a Market Data Session Logout Test / Order Session Logout Test:**

1. Submit a Logout (35=5) message.

2. Receive and process a Logout acknowledgment message.

Market Data Session Request and Order IDs Test / Order Session Request and Order IDs Test

The purpose of this test is to confirm client system messages don't contain special characters.

- Market Data Request (MDReqID)
- New Order Single (ClOrdID)
- Order Cancel Request (ClOrdID)
- Order Mass Cancel Request (ClOrdID)
- Order Status Request (ClOrdID)
- Test Request (TestReqID)

> ⓘ   For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> ⓘ   **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

CME Group will verify client submitted messages and reply with additional information to resolve issues (if applicable).

> ⓘ   **Note**: This test is used for both Market Data *or* Order Session Test formats. The above image shows the Market Data format version of the test.

Order Session screen

Market Data Session Heartbeat Interval Test / Order Session Heartbeat Interval Test

The purpose of this test is to confirm client system's heartbeats at regular intervals and correct.

> ⓘ   For the initial EBS Direct Taker API certification period:
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> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)
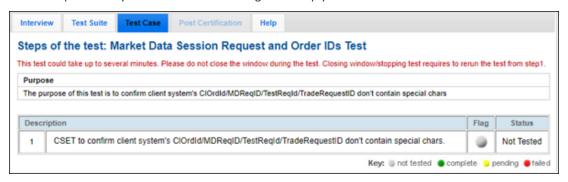
▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

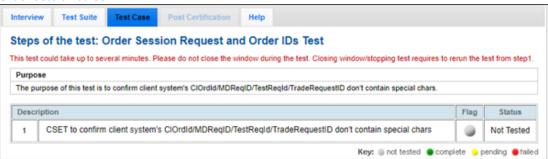> **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

CME Group will verify client systems heartbeat intervals and reply with additional information to resolve issues (if applicable).

> **Note**: This test is used for both Market Data *or* Order Session Test formats. The above image shows the Market Data format version of the test.

Order Session screen

Market Data Session FIX version Test / Order Session FIX version Test

The purpose of this test is to confirm client system's is sending FIX version 4.4

> **Note**: For additional information, see EBS Direct 2.0 – Development Considerations - FIX Version.

> For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)
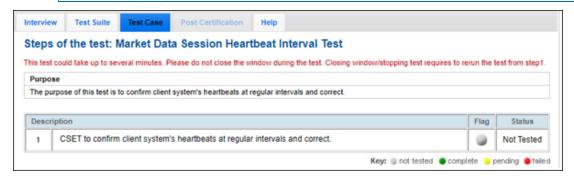
▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

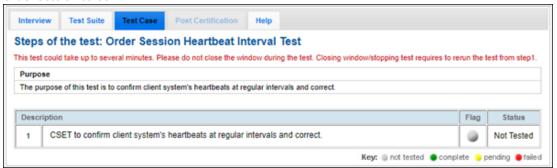> **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

CME Group will verify client submitted messages and reply with additional information to resolve issues (if applicable).

> **Note**: This test is used for both Market Data *or* Order Session Test formats. The above image shows the Market Data format version of the test.

Market Data Session / Order Session Tag 97-PossResend Verification Test

The purpose of this test is to confirm client submitted messages do not contain tag 97-PossResend, a standard header message that indicates that the message is a possible resend of a previously transmitted message.

> For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)
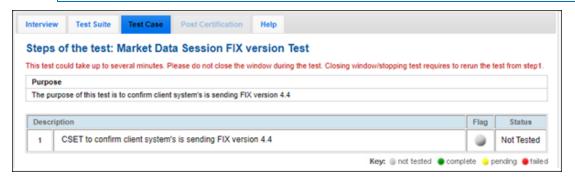
▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.
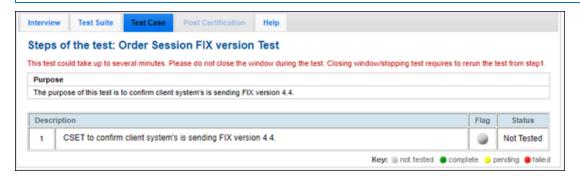
3. Click the **START TEST** button.

> **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

CME Group will verify client submitted messages and reply with additional information to resolve issues (if applicable).

> **Note**: This test is used for both Market Data *or* Order Session Test formats. The above image shows the Market Data format version of the test.

View Order Session test screen

Market Data Session Timestamp Verification Test / Order Session Timestamp Verification Test

The purpose of this test is to confirm client system's is sending a timestamp with millisecond precision.

> For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)
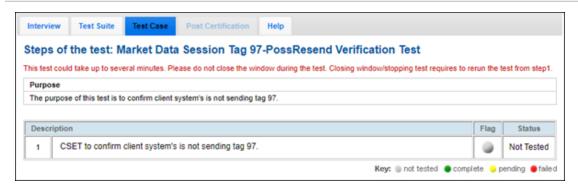
▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

   > **Note**:DO NOT select the START TEST button once the test is in progress.
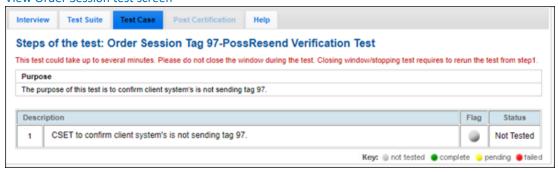   > If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

CME Group will verify client submitted messages and reply with additional information to resolve issues (if applicable).

> ℹ **Note**: This test is used for both Market Data *or* Order Session Test formats. The above image shows the Market Data format version of the test.

View Order Session test screen

Market Data Sweepable Pricing Snapshot Aggregated Book Tests

The purpose of this test is to verify that the client system can send and process Market Data Request messages.
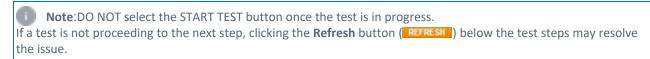
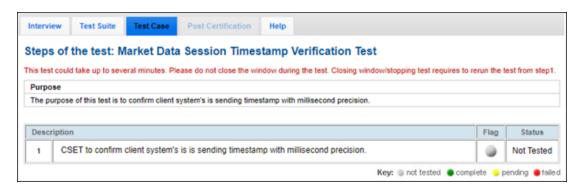> ℹ For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

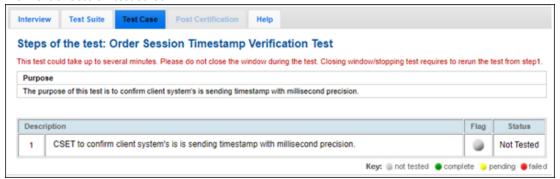3. Click the **START TEST** button.

> ℹ **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

Available Tests:

- Market Data Sweepable Pricing Snapshot Aggregated Book with *Full Book Depth Test for ECN Model*

- Market Data Sweepable Pricing Snapshot Aggregated Book with *Top of Book Test for ECN Model*

- Market Data Sweepable Pricing Snapshot Aggregated Book with *Number of Price Levels Test for ECN Model*

- Market Data Sweepable Pricing Snapshot Aggregated Book with *Full Book Depth using MDEntrySize Test for ECN*

   Model

▷ **To run a Market Data Sweepable Pricing Snapshot Aggregated Book Test:**

1. Over the Market Data session, submit a Market Data Request (35=V) message for Sweepable Pricing subscription to Snapshot Aggregated Book with *Full Book / Top of Book / Number of Price levels* Depth.

   tag 264-MarketDepth

   - 0=Full Book

   - 1=Top of Book

   - n=number of price levels

2. Receive and process Market Data Snapshot Full Refresh (35=W) message.

Market Data Sweepable Pricing Snapshot Non-aggregated Book Tests

The purpose of this test is to verify that the client system can send and process Market Data Request messages.

> ⓘ   For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)
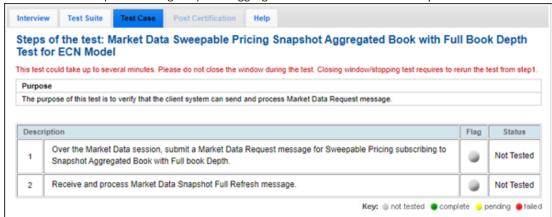
▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

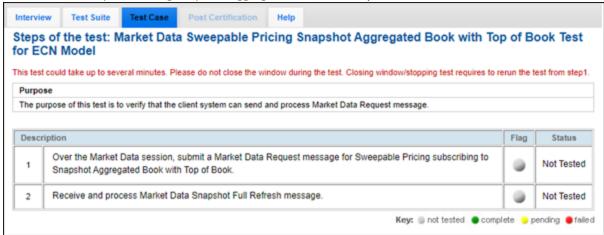   > ⓘ   **Note**:DO NOT select the START TEST button once the test is in progress.
   > If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.
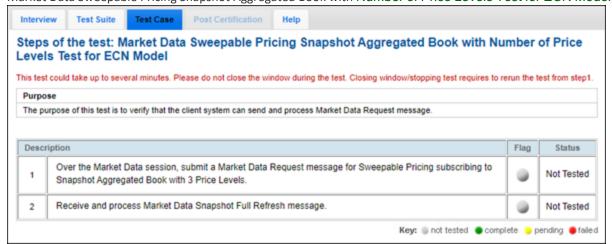
Available Tests:

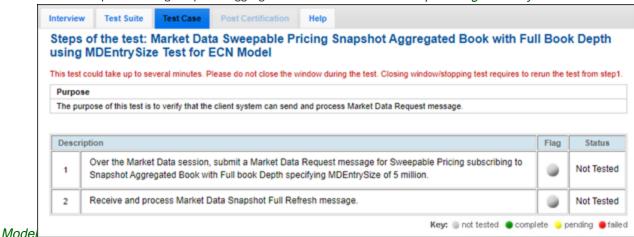- Market Data Sweepable Pricing Snapshot Non-aggregated Book with Full Book Depth Test for ECN / Pass-Through Model

- Market Data Sweepable Pricing Snapshot Non-aggregated Book with Top of Book Test for *ECN*

 / *Pass-Through*

 Model

- Market Data Sweepable Pricing Snapshot Non-aggregated Book with Number of Price Levels Test for *ECN*

 / *Pass-*

Through

Model

- [Market Data Sweepable Pricing Snapshot Non-aggregated Book with Full Book Depth using MDEntrySize Test for ECN / Pass-Through Model](#)

ℹ **Note**: This test is used for ECN *or* Pass-Through formats. The above image shows the ECN format version of the test.

▷ **To run a Market Data Sweepable Pricing Snapshot Non-Aggregated Book Test:**

1. Over the Market Data session, submit a Market Data Request (35=V) message for Sweepable Pricing subscription to Snapshot (tag 265-MDUpdateType=0) Non-Aggregated Book with *Full Book / Top of Book / Number of Price Levels* Depth.

   tag 264-MarketDepth

   - 0=Full Book
   - 1=Top of Book
   - n=number of price levels

2. Receive and process Market Data Snapshot Full Refresh (35=W) message.

Pass-Through format screen

▶ **To run a Market Data Sweepable Pricing Snapshot Non-Aggregated Book with Full Book Depth _using MDEntrySize_ Test:**

> ℹ **Note**: This test is used for ECN _or_ Pass-Through formats. The above image shows the ECN format version of the test.
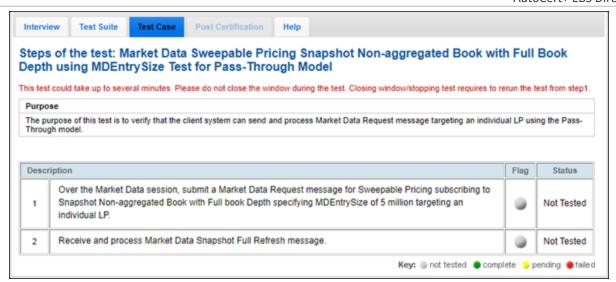
1. Over the Market Data session, submit a Market Data Request (35=V) message for Sweepable Pricing subscription to Snapshot (tag 265-MDUpdateType=0) Aggregated Book with _Full Book_ (tag 264-MarketDepth=0) Depth specifying MDEntrySize (→271) of 5 million.

2. Receive and process Market Data Snapshot Full Refresh (35=W) message.

Pass-Through format screen

Market Data Sweepable Pricing Incremental Non-aggregated Full Book Test

The purpose of this test is to verify that the client system can send and process a Market Data Request message.

> ℹ️ For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)
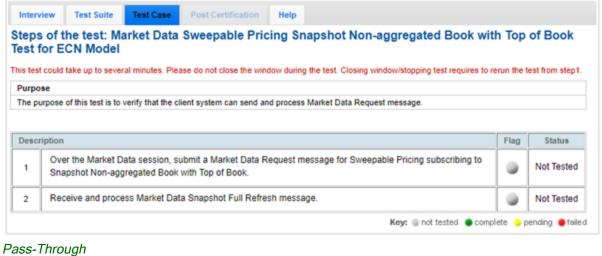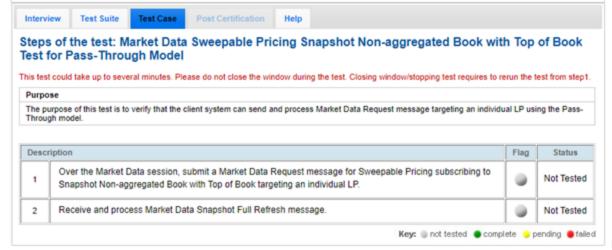
Available Tests:

- Market Data Sweepable Pricing Incremental Non-aggregated Book with Full Book Depth for ECN / Pass-Through
- Market Data Sweepable Pricing Incremental Non-aggregated Book with Full Book Depth using MDEntrySize Test for ECN / Pass-Through Model

Full Book Depth Tests

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

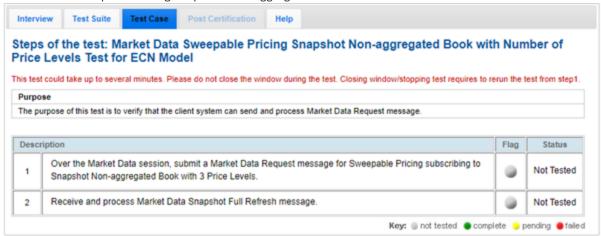> ℹ️ **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

▷ **To run a Market Data Sweepable Pricing Incremental Non-aggregated Book with Full Book Depth test:**

> ℹ **Note**: This test is used for ECN *or* Pass-Through formats. The above image shows the ECN format version of the test.

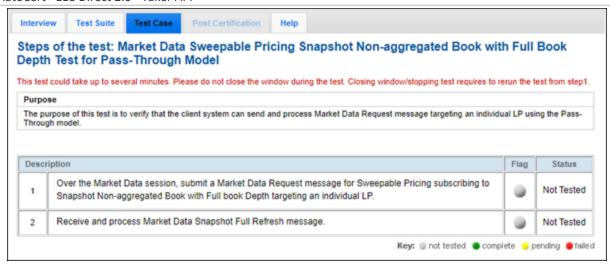1. Over the Market Data session, submit a Market Data Request message for Sweepable Pricing subscribing to Incremental Non-aggregated Book with *Full Book* (tag 264=0) Depth.

2. Receive and process Market Data Snapshot Full Refresh (35=W) message / Market Data Incremental Refresh (35=X) message.

Pass-Through format test screen

Full Book Depth using MDEntry Size Tests

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> ℹ **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

▷ **To run a Market Data Sweepable Pricing Incremental Non-aggregated Book with Full Book Depth *using MDEntrySize* test:**

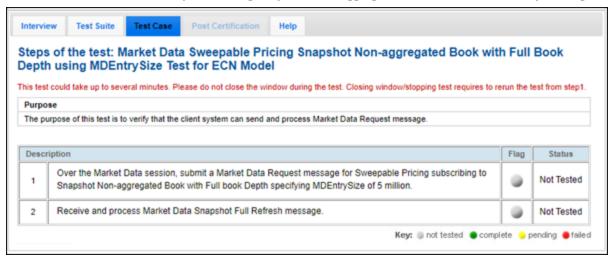ℹ️ **Note**: This test is used for ECN *or* Pass-Through formats. The above image shows the ECN format version of the test.

1. Over the Market Data session, submit a Market Data Request (35=V) message for Sweepable Pricing subscribing to Incremental Non-aggregated Book with Full book Depth *Full Book* (tag 264=0) specifying MDEntrySize (→271) of 5 million targeting an individual LP (tag 128-DeliverToCompID).

2. Receive and process Market Data Snapshot Full Refresh (35=W) message / Market Data Incremental Refresh (35=X) message.

Pass-Through format test screen

Market Data Sweepable Pricing Processing Market Data Request Reject Test

The purpose of this test is to verify that the client system can receive and process Market Data Request Reject.

ℹ️ For the initial EBS Direct Taker API certification period:
- AutoCert+ test cases will appear in read-only format.
- To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.
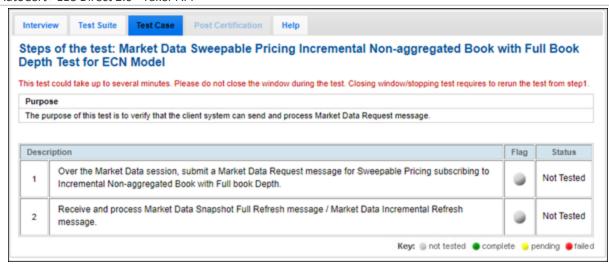
3. Click the **START TEST** button.

> ⓘ **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

To run a **Market Data Sweepable Pricing Processing Market Data Request Reject Test:**

1. Over the Market Data session, submit a Market Data Request (35=V) message for Sweepable Pricing.

2. Receive and process Market Data Request Reject (35=Y) message.
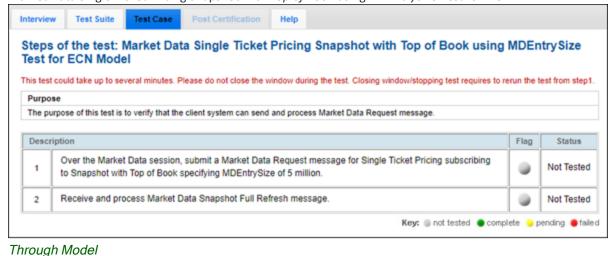
Market Data Single Ticket Pricing Snapshot Tests

The purpose of this test is to verify that the client system can send and process Market Data Request message.
Available tests:
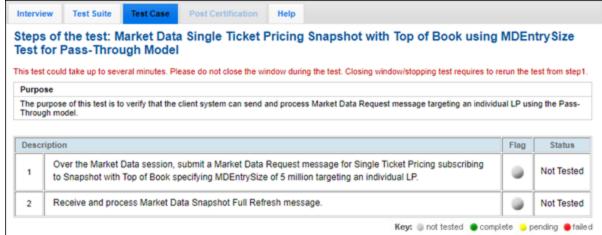
- Market Data Single Ticket Pricing Snapshot with *Full Book* Depth using *MDEntrySize* Test for *ECN*

/ *Pass-Through*

Model
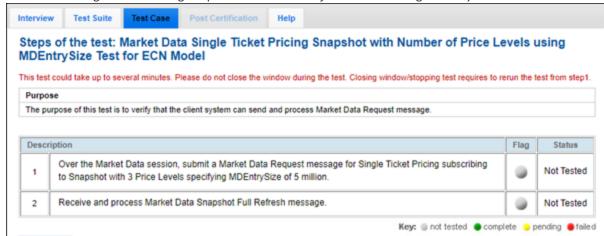
- Market Data Single Ticket Pricing Snapshot with *Top of Book* using *MDEntrySize* Test for *ECN*

/ *Pass-Through Model*
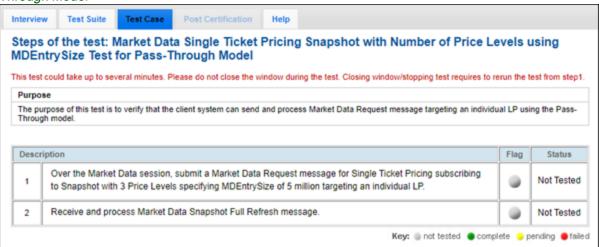
- Market Data Single Ticket Pricing Snapshot with *Number of Price Levels* using *MDEntrySize* Test for *ECN*

/ *Pass-*

Through Model

- Market Data Single Ticket Pricing Snapshot with *Full Book* Depth Test for *ECN*

Pass-Through Model

- Market Data Single Ticket Pricing Snapshot with *Top of Book* Test for *ECN*
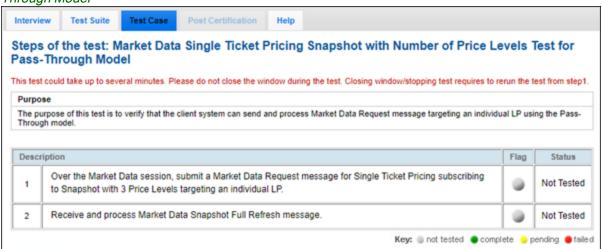
 /

Pass-Through Model

- Market Data Single Ticket Pricing Snapshot with *Number of Price Levels* Test for *ECN*

 / *Pass-*

Through Model

> ℹ️ For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> ℹ️ **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

▷ **To run a Market Data Single Ticket Pricing Snapshot test:**

1. Over the Market Data session, submit a Market Data Request (35=V) message for Single Ticket Pricing subscribing (tag 263-SubscriptionRequestType=1) to Snapshot (tag 265-MDUpdateType=0) with *Full book / Top of Book / Number of price levels* Depth (tag 264-MarketDepth) specifying MDEntrySize (InstrmtMDReqGrp →271) of 5 million.

   tag 264-MarketDepth

   - 0=Full Book

   - 1=Top of Book

   - n=number of price levels

2. Receive and process Market Data Snapshot Full Refresh (35=W) message.

Market Data Sweepable Pricing Processing Market Data Request Reject Test

The purpose of this test is to verify that the client system can receive and process Market Data Request Reject.

> ℹ️ For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> ⓘ   **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.
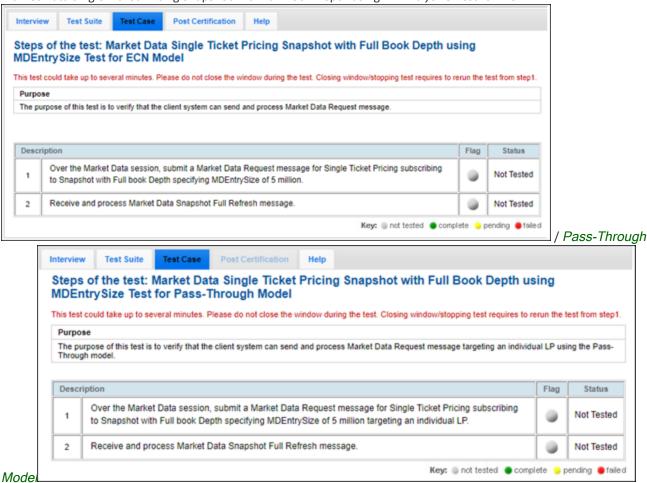
▷ **To run a Market Data Single Ticket Pricing Processing Market Data Request Reject Test:**

1. Over the Market Data session, submit a Market Data Request (35=V) message for Single Ticket Pricing.

2. Receive and process Market Data Request Reject (35=Y) message.

Order Entry Sweepable Trading Tests

The purpose of this test is to verify the client system can submit a Day limit order sweeping the market, receive and process the Acknowledgment and Fill messages.
Available Tests:

- Order Entry Sweepable Trading Day Limit Order Test

- Order Entry Sweepable Trading IOC Order Pass-Through Model Test

- Order Entry Sweepable Trading IOC Order ECN Model Test

> ℹ️ For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

   > ℹ️ **Note**:DO NOT select the START TEST button once the test is in progress.
   > If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

▷ **To run an Order Entry Sweepable Trading Day Limit Order Test:**

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

Steps of the test: Order Entry Sweepable Trading Day Limit Order Test

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 the client system can submit a Day limit order sweeping the market, receive and process the Acknowledgement and Fill messages.

	Description	Flag	Status
1	Over the Order session, submit a Day Limit Order message with a quantity of 5 million.	●	Not Tested
2	Receive and Process New Order Execution Report.	●	Not Tested
3	Receive and Process Full Fill Execution Report.	●	Not Tested
4	Submit a Day Limit Order message with a quantity of 10 million.	●	Not Tested
5	Receive and Process New Order Execution Report.	●	Not Tested
6	Receive and Process Partial Fill Execution Report.	●	Not Tested

Key: ● not tested ● complete ● pending ● failed

1. Over the Order session, submit a Day Limit Order [35=D (tag 59-Day, tag 1300-MarketSegmentID)] message with a quantity (tag 38-OrderQty) of 5 million.

2. Receive and Process New Order Execution Report (35=8).

3. Receive and Process Full Fill Execution Report [35=8 (tag 39-OrdStatus)].

4. Submit a Day Limit Order [35=D (tag 59-Day] message with a quantity (tag 38-OrderQty) of 10 million.

5. Receive and Process New Order Execution Report (35=8).

6. Receive and Process Partial Fill Execution Report [35=8 (tag 150-ExecType, tag 39-OrdStatus)].

▷ **To run an Order Entry Sweepable Trading IOC Order Pass-Through Model Test:**

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

Steps of the test: Order Entry Sweepable Trading IOC Order Pass-Through Model Test

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 the client system can submit an IOC order targeting an individual LP using the Pass-Through model sweeping the market, receive and process the Acknowledgement, Fill and Expired messages.

	Description	Flag	Status
1	Over the Order session, submit an IOC Order message with a quantity of 5 million targeting an individual LP.	●	Not Tested
2	Receive and Process New Order Execution Report.	●	Not Tested
3	Receive and Process Full Fill Execution Report.	●	Not Tested
4	Submit an IOC Order message with a quantity of 10 million targeting an individual LP.	●	Not Tested
5	Receive and Process New Order Execution Report.	●	Not Tested
6	Receive and Process Partial Fill Execution Report.	●	Not Tested
7	Receive and Process Cancelled Execution Report for the remaining quantity.	●	Not Tested

Key: ● not tested ● complete ● pending ● failed

1. Over the Order session, submit an IOC Order [35=D (tag 59-TimeInForce, tag 1300-MarketSegmentID] message with a quantity (tag 38-OrderQty) of 5 million targeting an individual LP.

2. Receive and Process New Order Execution Report (35=8).

3. Receive and Process Full Fill Execution Report [35=8 (tag 39-OrdStatus)].

4. Submit an IOC Order [35=D (tag 59-TimeInForce)] message with a quantity (tag 38-OrderQty) of 10 million targeting an individual LP.

5. Receive and Process New Order Execution Report [35=8 (tag 150-ExecType)].

6. Receive and Process Partial Fill Execution Report [35=8 (tag 150-ExecType)].

7. Receive and Process Canceled Execution Report [35=8 (tag 150-ExecType)] for the remaining quantity.

▷ **To run an Order Entry Sweepable Trading IOC Order ECN Model Test:**

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

Steps of the test: Order Entry Sweepable Trading IOC Order ECN Model Test

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 the client system can submit an IOC order sweeping the market, receive and process the Acknowledgement, Fill and Expired messages.

	Description	Flag	Status
1	Over the Order session, submit an IOC Order message with a quantity of 5 million.	◯	Not Tested
2	Receive and Process New Order Execution Report.	◯	Not Tested
3	Receive and Process Full Fill Execution Report.	◯	Not Tested
4	Submit an IOC Order message with a quantity of 10 million.	◯	Not Tested
5	Receive and Process New Order Execution Report.	◯	Not Tested
6	Receive and Process Partial Fill Execution Report.	◯	Not Tested
7	Receive and Process Cancelled Execution Report for the remaining quantity.	◯	Not Tested

Key: ◯ not tested ● complete ◯ pending ● failed

1. Over the Order session, submit an IOC Order [35=D (tag 59-TimeInForce, tag 1300-MarketSegmentID)] message with a quantity of 5 million.

2. Receive and Process New Order Execution Report (35=8).

3. Receive and Process Full Fill Execution Report (35=8).

4. Submit an IOC Order [35=D (tag 59-TimeInForce)] message with a quantity of 10 million.

5. Receive and Process New Order Execution Report [35=8 (tag 150-ExecType)].

6. Receive and Process Partial Fill Execution Report [35=8 (tag 150-ExecType)].

7. Receive and Process Canceled Execution Report [35=8 (tag 150-ExecType)] for the remaining quantity.

Order Entry Single Ticket Trading Test

The purpose of this test is to verify the client system can submit a Day limit order for Single Ticket, receive and process the Accomplishment and Fill messages.

> For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)
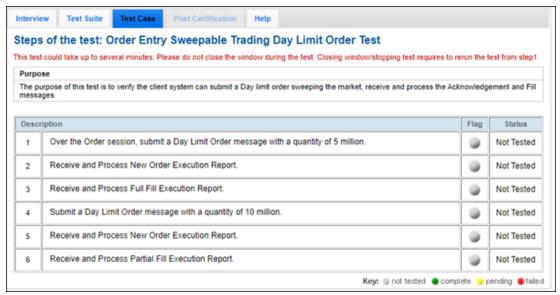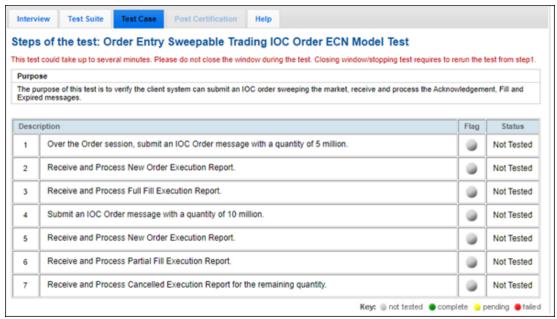
Available tests:

- Order Entry Single Ticket Trading Day Limit Order Test

- Order Entry Single Ticket Trading FOK Order Pass-Through Model Test

- Order Entry Single Ticket Trading FOK Order ECN Model Test

▷ **To select the Test:**

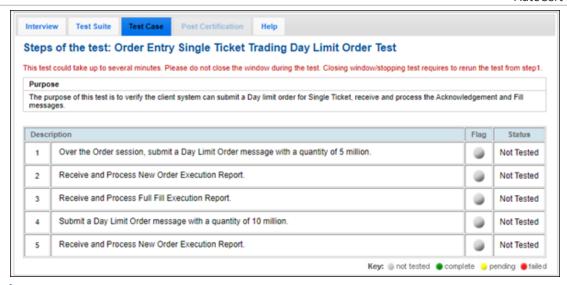1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

▶ **To run an Order Entry Single Ticket Trading Day Limit Order Test :**

1. Over the Order session, submit a Day Limit Order [35=D (tag 59-Day, tag 38-OrderQty, tag 1300-MarketSegmentID)] message with a quantity of 5 million.

2. Receive and Process New Order Execution Report [35=8 (tag 150-ExecType, tag 39-OrdStatus)].

3. Receive and Process Full Fill Execution Report [35=8 (tag 150-ExecType, tag 39-OrdStatus)].

4. Submit a Day Limit Order [35=D (tag 59-Day, tag 38-OrderQty)] message with a quantity of 10 million.

5. Receive and Process New Order Execution Report (35=8).

▶ **To run an Order Entry Single Ticket Trading FOK Order Pass-Through Model Test:**

1. Over the Order session, submit an FOK Order [35=D (tag 59-TimeInForce, tag 1300-MarketSegmentID)] message with a quantity (tag 38-OrderQty) of 5 million targeting an individual LP.

2. Receive and Process New Order Execution Report (35=8).

3. Receive and Process Full Fill Execution Report (35=8).

4. Submit an FOK Order [35=D (tag 59-TimeInForce) message with a quantity (tag 38-OrderQty) of 10 million targeting an individual LP.

5. Receive and Process New Order Execution Report [35=8 (tag 150-ExecType, tag 39-OrdStatus)].

6. Receive and Process Canceled Execution Report [35=8 (tag 150-ExecType, tag 39-OrdStatus)].

▶ **To run an Order Entry Single Ticket Trading FOK Order ECN Model Test:**

1. Over the Order session, submit an FOK Order [35=D (tag 59-TimeInForce, tag 1300-MarketSegmentID)] message with a quantity (tag 38-OrderQty) of 5 million.

2. Receive and Process New Order Execution Report [35=8 (tag 39-OrdStatus)].

3. Receive and Process Full Fill Execution Report [35=8 (tag 39-OrdStatus)].

4. Submit an FOK Order [35=D (tag 59-TimeInForce, tag 1300-MarketSegmentID)] message with a quantity of 10 million.

5. Receive and Process New Order Execution Report [35=8 (tag 150-ExecType, tag 39-OrdStatus)].

6. Receive and Process Canceled Execution Report [35=8 (tag 150-ExecType, tag 39-OrdStatus)].

Order Entry Resting Day Limit Order Test

The purpose of this test is to verify the client system can submit a Day limit order, receive and process the Acknowledgment, Fill and expired messages.

> ⓘ   For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> ⓘ   **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

▶ **To run an Order Entry Resting Day Limit Order Test:**

1. Over the Order session, submit a Day Limit Order [35=D(tag 59-Day)] message with a quantity (tag 38-OrderQty) of 10 million.

2. Receive and Process New Order Execution Report [35=8 (tag 150-ExecType, tag 39-OrdStatus)].

3. Receive and Process Partial Fill Execution Report [35=8 (tag 150-ExecType, tag 39-OrdStatus)].

Order Entry GTC Order Test

The purpose of this test is to verify the client system can submit a GTC order, receive and process the Acknowledgment messages.

> ℹ️ For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)
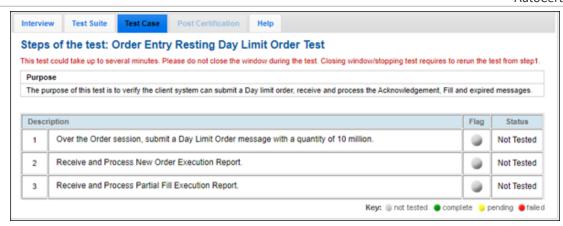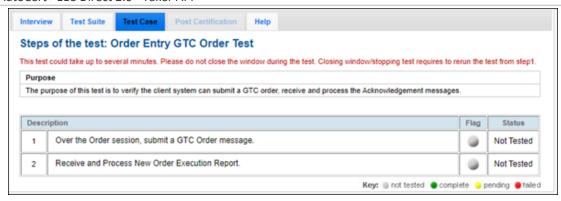
▶ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> ℹ️ **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

▷ **To run an Order Entry GTC Order Test:**

1. Over the Order session, submit a GTC Order [35=D (tag 59-TimeInForce)] message.

2. Receive and Process New Order Execution Report [35=8 (tag 150-ExecType, tag 39-OrdStatus)].
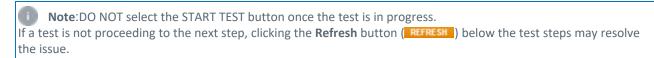
Order Cancellation Test

The purpose of this test is to verify the client system can submit and cancel a Day limit order, receive and process Canceled, Order Cancel Reject and Pending Cancel message.
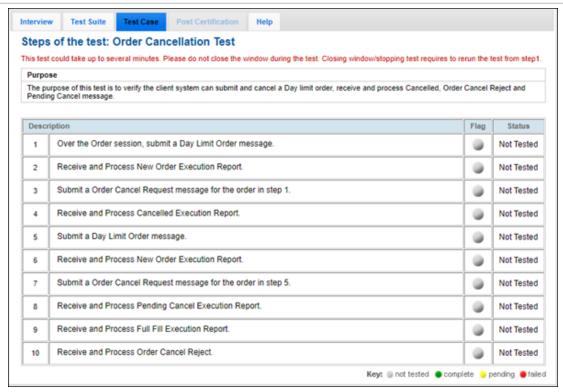
> ⓘ For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> ⓘ **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

▷ **To run an Order Cancellation Test:**

1. Over the Order session, submit a Day Limit Order [35=D (tag 59-Day)] message.

2. Receive and Process New Order Execution Report (35=8).

3. Submit a Order Cancel Request [35=F (tag 41-OrigClOrdID)] message for the order in step 1.

4. Receive and Process Canceled Execution Report [35=8 (tag 39-OrdStatus)].

5. Submit a Day Limit Order [35=D (tag 59-Day)] message.

6. Receive and Process New Order Execution Report (35=8).

7. Submit a Order Cancel Request [35=F (tag 41-OrigClOrdID)] message for the order in step 5.

8. Receive and Process Pending Cancel Execution Report [35=8 (tag 150-ExecType, tag 39-OrdStatus)].

9. Receive and Process Full Fill Execution Report [35=8 (tag 39-OrdStatus)].

10. Receive and Process Order Cancel Reject (35=9).

Order Status Request Test

The Purpose of this test is to verify that customer application can submit Order Status Request and receive Order Status Execution Report (35=8, 150=I) when obtaining status for the order.
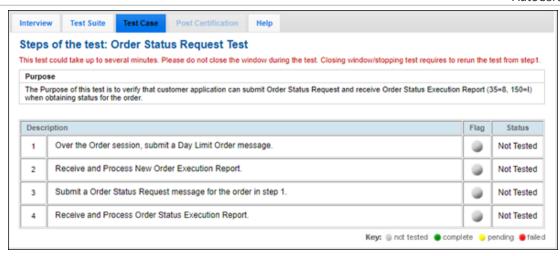
> ⓘ For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> ⓘ **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

▷ **To run an Order Status Request Test:**

1. Over the Order session, submit a Day Limit Order [35=D (tag 59-Day)] message.

2. Receive and Process New Order Execution Report (35=8).

3. Submit a Order Status Request (35=H) message for the order in step 1.

4. Receive and Process Order Status Execution Report [35=8 (tag 150-ExecType=I)].

Order Entry Processing Rejects Test

The Purpose of this test is to verify that customer application can receive and process reject messages.

> ⓘ For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)
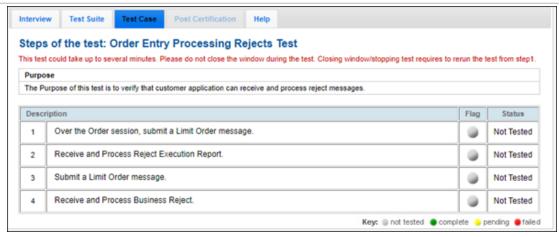
▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> ⓘ **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

▷ **To run an Order Entry Processing Rejects Test:**

1. Over the Order session, submit a Limit Order [35=D(tag 40-OrdType)] message.

2. Receive and Process Reject Execution Report [35=8 (tag 150-ExecType, tag 39-OrdStatus)].

3. Submit a Limit Order [35=D(tag 40-OrdType)] message.

4. Receive and Process Business Reject (35=j).

Market Data No pricing on Subscription Test

The purpose of this test is to verify that the client system can properly receive and process an empty book.
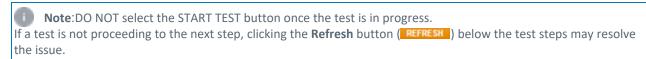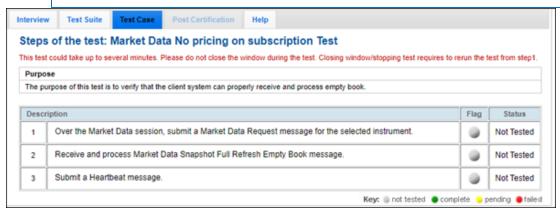
> ⓘ   For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> ⓘ   **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

> **To run a Market Data No pricing on Subscription Test:**

1. Over the Market Data session, submit a Market Data Request (35=V) message for the selected instrument.

2. Receive and process Market Data Snapshot Full Refresh Empty Book (35=W) message.

3. Submit a Heartbeat (35=0) message.

Market Data Sweepable Pricing Snapshot Tests

The purpose of this test is to verify that the client system can properly receive and process book management message.

- Market Data Sweepable Pricing Snapshot *Aggregated* Book test
- Market Data Sweepable Pricing Snapshot *Non-Aggregated* Book test

> ℹ️ For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)
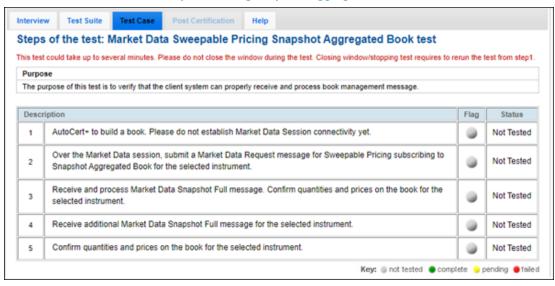
> **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

> ℹ️ **Note**:DO NOT select the START TEST button once the test is in progress.
> If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

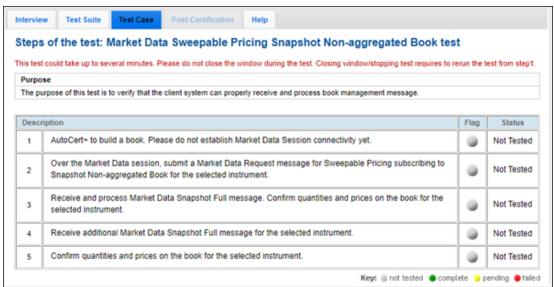> **To run a Market Data Sweepable Pricing Snapshot *Aggregated* Book test:**

1. AutoCert+ to build a book.

   Do not establish Market Data Session connectivity yet.

2. Over the Market Data session, submit a Market Data Request (35=V) message for Sweepable (tag 1300=D segment) Pricing subscribing to Snapshot Aggregated Book (tag 266-AggregatedBook) for the selected instrument.

3. Receive and process Market Data Snapshot Full (35=W) message.

4. Confirm quantities and prices on the book for the selected instrument.

5. Receive additional Market Data Snapshot Full (35=W) message for the selected instrument.

6. Confirm quantities and prices on the book for the selected instrument.

▷ **To run a Market Data Sweepable Pricing Snapshot *Non-Aggregated* Book test:**

1. AutoCert+ to build a book.

   Do not establish Market Data Session connectivity yet.

2. Over the Market Data session, submit a Market Data Request (35=V) message for Sweepable (tag 1300=D segment) Pricing subscribing to Snapshot Non-aggregated Book (tag 266-AggregatedBook) for the selected instrument.

3. Receive and process Market Data Snapshot Full (35=W) message.

4. Confirm quantities and prices on the book for the selected instrument.

5. Receive an additional Market Data Snapshot Full (35=W) message for the selected instrument.

6. Confirm quantities and prices on the book for the selected instrument.

Market Data Sweepable Pricing Incremental Non-aggregated Book Test

The purpose of this test is to verify that the client system can properly receive and process book management message.

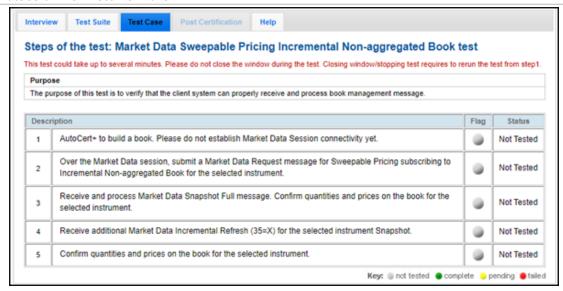> ⓘ For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

Note:DO NOT select the START TEST button once the test is in progress.
If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

▷ **To run a Market Data Sweepable Pricing Incremental Non-aggregated Book test:**

1. AutoCert+ to build a book.

   Do not establish a Market Data Session connectivity yet.

2. Over the Market Data session, submit a Market Data Request (35=V) message for Sweepable Pricing subscribing to Incremental Non-aggregated Book for the selected instrument.

3. Receive and process Market Data Snapshot Full (35=W) message.

   Confirm *quantities* and *prices* on the book for the selected instrument.

4. Receive additional Market Data Incremental Refresh (35=X) for the selected instrument.

   Confirm quantities and prices on the book for the selected instrument.

Market Data Single Ticket Pricing Snapshot Non-aggregated Book Test

The purpose of this test is to verify that the client system can properly receive and process book management message.
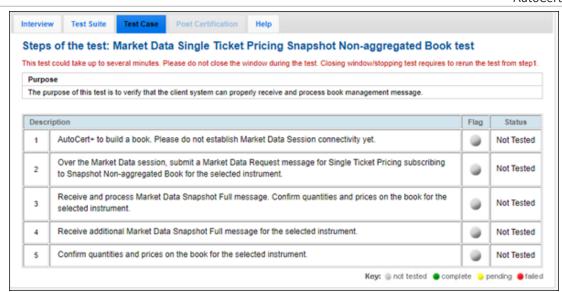
> ⓘ For the initial EBS Direct Taker API certification period:
> - AutoCert+ test cases will appear in read-only format.
> - To complete Interview responses and Tests, users must contact Certification Support for Electronic Trading (CSET)

▷ **To select the Test:**

1. Select a **Identifier** from the drop-down and select **ASSIGN** if not already assigned.

2. From the **Test Suite** tab, select the linked test.

3. Click the **START TEST** button.

   > ⓘ **Note**:DO NOT select the START TEST button once the test is in progress.
   > If a test is not proceeding to the next step, clicking the **Refresh** button (REFRESH) below the test steps may resolve the issue.

To run a Market Data Single Ticket Pricing Snapshot Non-aggregated Book test:

1. AutoCert+ to build a book.

   Please do not establish Market Data Session connectivity yet.

2. Over the Market Data session, submit a Market Data Request (35=V) message for Single Ticket Pricing subscribing to Snapshot Non-aggregated Book for the selected instrument.

3. Receive and process Market Data Snapshot Full (35=W) message.

   Confirm quantities and prices on the book for the selected instrument.

4. Receive additional Market Data Snapshot Full (35=W) message for the selected instrument.

   Confirm quantities and prices on the book for the selected instrument.