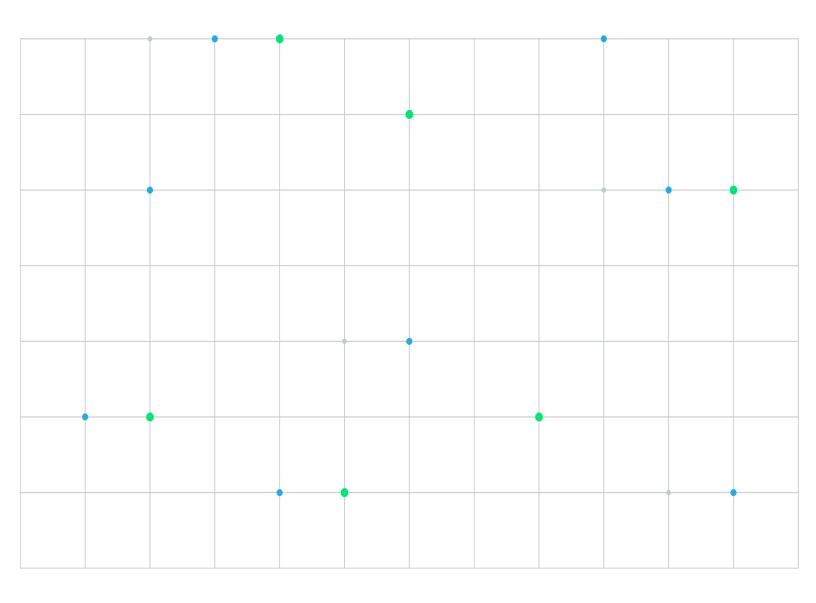


AutoCert+ BrokerTec US Treasury Data on MDP User Manual

25 March 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+ BrokerTec US Treasury Data on MDP test suite.

Market Data Platform supports a Simple Binary Encoding (SBE) Market Data Platform (MDP) channel for BrokerTec U.S. Treasury Data. This market data channel distributes comprehensive BrokerTec U.S. Treasury price discovery market data.

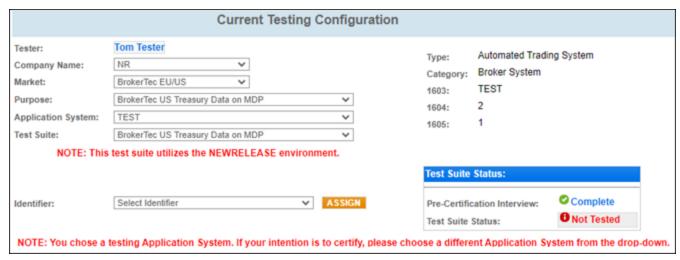
For additional information, see BrokerTec US Treasury Market Data on the CME Group client systems wiki.

Running and Navigating AutoCert+



To run and navigate AutoCert+:

- 1. Log into the automated certification tool.
- 2. Navigate to the AutoCert+ BrokerTec US Treasury Data on MDP test suite:



- a. Select a Company Name.
- b. From the Market drop-down, select BrokerTec EU/US.
- c. From the Purpose drop-down, select BrokerTec US Treasury Data on MDP.
- d. Select an Application System.

Note: If there are no application systems listed in the drop-down, contact your Global Account Manager (GAM) representative to create one.

- e. From the Test Suite drop-down, select BrokerTec US Treasury Data on MDP.
- 3. Review general AutoCert+ test suite navigation and general interview information.
- 4. Complete the Interview for this test suite.
- 5. Complete the applicable <u>test</u> cases.
- 6. Complete the certification process from the Post Certification tab.

What's New

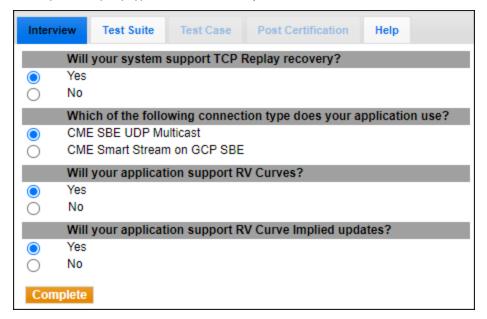
The list below illustrates the updates made to the AutoCert+ BrokerTec US Treasury Data on MDP Help system.

Date	Topic(s)	Description
25 March 2024	Interview	Updated interview questions to receive information on connection type, RV Curves, RV Curve Implied.
25 March 2024	Interview	Consolidated Book Management for RV Curves Book Management for RV Curve
24 Oct 2022	Format	Website and PDF format changes only.
06 Sep 2019	Recovery via TCP Replay	Updated screen shots and steps to reflect update to step 5 in the AutoCert+ test screen.
15 Aug 2019	Getting Started	Added note about application systems to step 2.
14 Aug 2019	All	Initial release

Interview

You must complete the pre-certification interview before running the test case.

Select your company type and click the **Complete** button.



Certification Tests

The AutoCert+ BrokerTec US Treasury Data on MDP certification test suite consists of the following:

- Start of the Week
- Book Management
- Statistics
- Recovery via TCP Replay

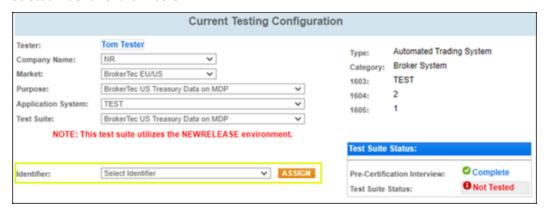
Start of the Week

This test verifies that your application system can properly process BrokerTec Market Data Incremental Refresh (tag 35-MsgType=X) book reset (tag 269-MDEntryType=J) messages that are sent at the beginning of the week as well as book updates to actives.

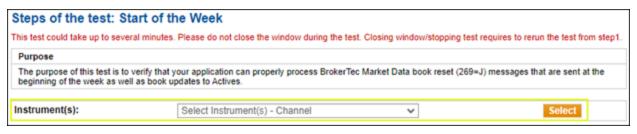


To run the Start of the Week test

1. Select an Identifier then ASSIGN.



2. Select an Instrument.

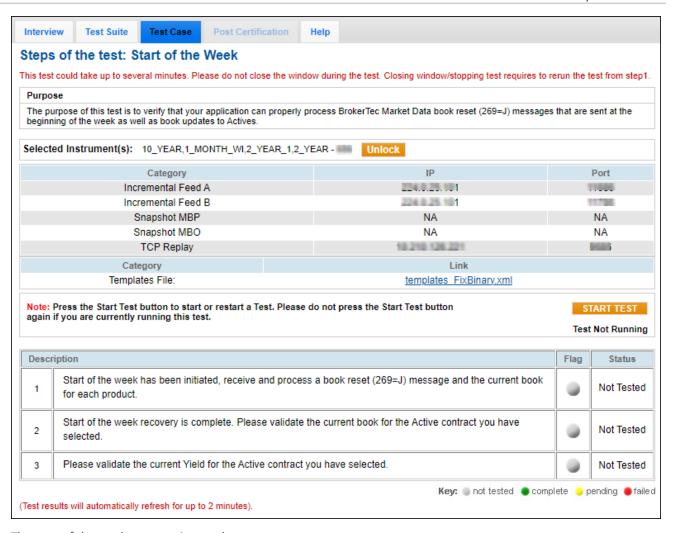


3. Click START TEST. and REFRESH.



Note: To restart the test, click START TEST and then click REFRESH.

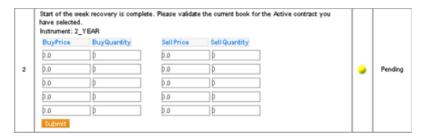
4. The start of the week is initiated. Receive and process a Market Data Incremental Refresh (tag 35-MsgType=X) book reset (tag 269-MDEntryType=J) message and the current book for each product.



5. The start of the week recovery is complete.

Validate the current book for the active contract that you selected.

- Price: tag 270-MDEntryPx
- Quantity: tag 271-MDEntrySize



- 6. Enter the bid yield and ask yield for the active contract that you selected.
 - Yield: tag 423-PriceType



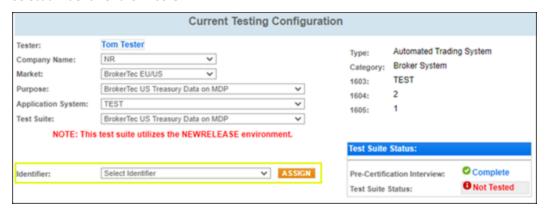
Book Management

This test verifies that your application system can properly process BrokerTec Market Data Incremental Refresh (tag 35-MsgType=X) book update messages.



To run the Book Management test

1. Select an Identifier then ASSIGN.



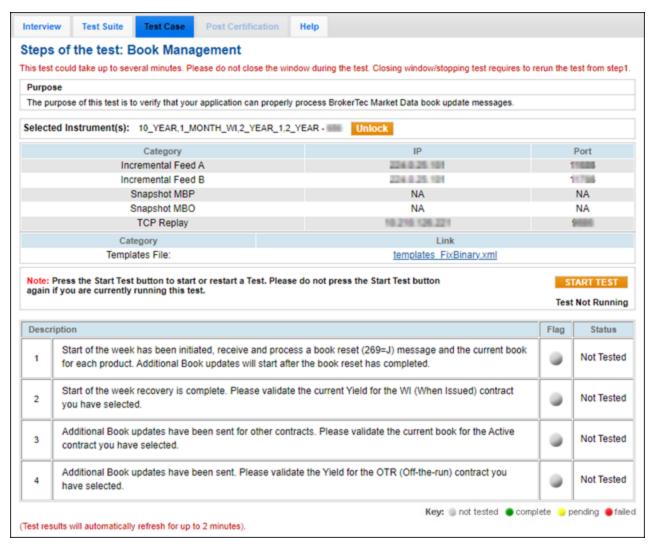
Select an Instrument.



3. Click START TEST. and REFRESH.



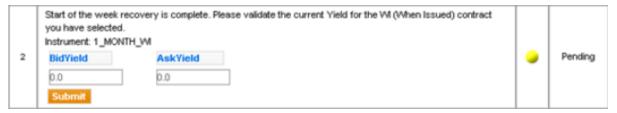
4. The start of the week is initiated.



Receive and process a Market Data Incremental Refresh (tag 35-MsgType=X) book reset (tag 269-MDEntryType=J) message and the current book for each product.

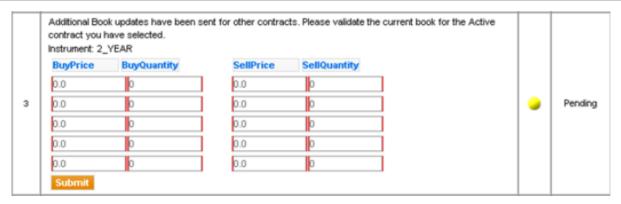
Additional book updates will start after the book reset has completed.

5. The start of the week recovery is complete. Enter the current <u>Yield</u> (tag 423-PriceType=9) for the WI (When Issued) contract that you selected.



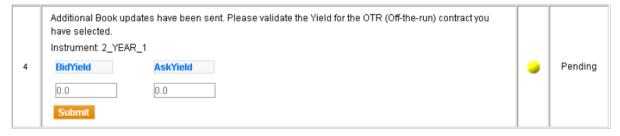
6. Additional book updates have been sent for other contracts.

Validate the current book for the active contract that you selected.



7. Additional book updates have been sent.

Enter the Yield (423=9) for the OTR (Off-the-Run) contract that you selected.



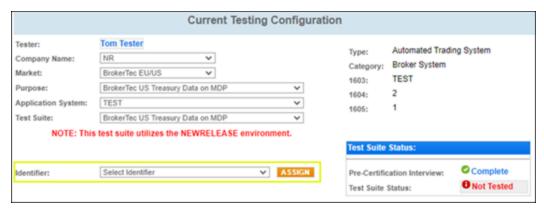
Statistics

This test verifies that your application system can properly process BrokerTec Market Data Incremental Refresh (tag 35-MsgType=X) statistic messages that are sent at various times on the Incremental feed.

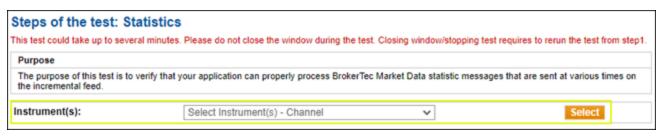


To run the Statistics test

1. Select an Identifier then ASSIGN.



2. Select an Instrument.

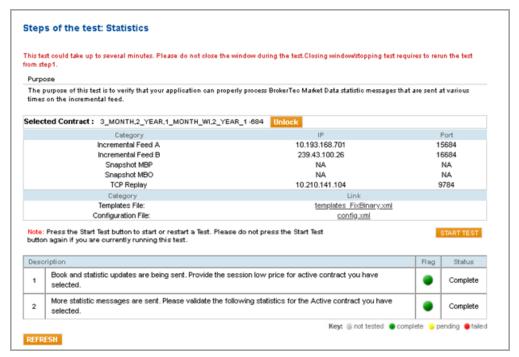


3. Click START TEST. and REFRESH.



Note: To restart the test, click START TEST and then click REFRESH.

4. Book and statistic updates are being sent.



Enter the session Low Trade Price for the active contract that you selected.



5. More statistic messages are sent.

Enter the following statistics for the active contract that you selected.

- Last Trade Price tag 270-MDEntryPx
- Last Trade Size tag 271-MDEntrySize
- Volume Weighed Average Price (VWAP)
- · Volume Weighed Average Yield (VWAY)



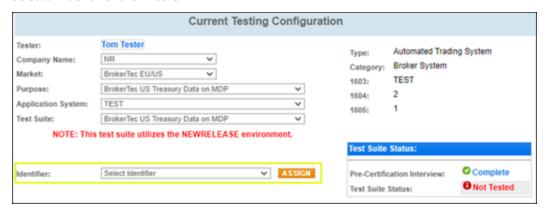
Recovery via TCP Replay

This test verifies that your application can perform recovery via TCP Replay.

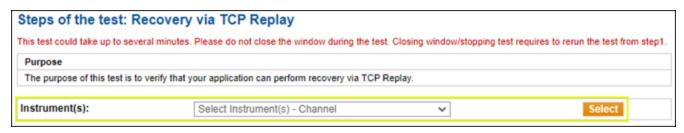


To run the Recovery via TCP Replay test

1. Select an Identifier then ASSIGN.



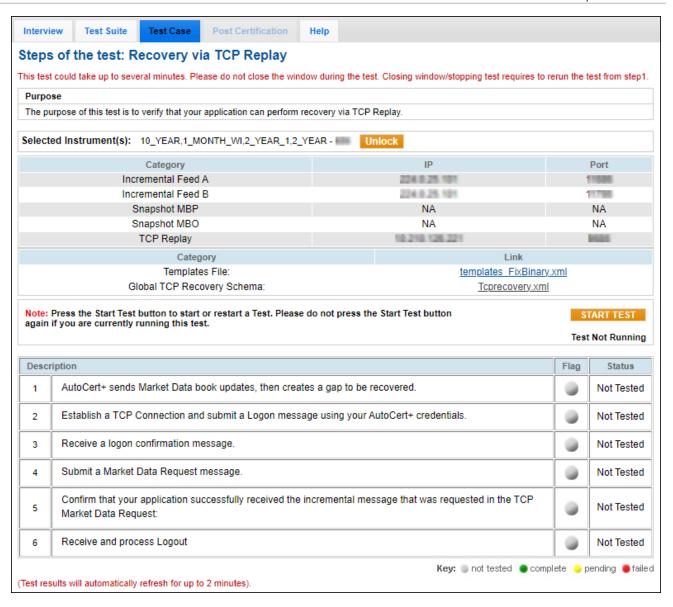
2. Select an **Instrument**.



3. Click START TEST. and REFRESH.



4. AutoCert+ sends market data book updates, then creates a gap to be recovered.



- 5. Establish a TCP Connection and submit a Logon (tag 35-MsgType=A) message using your AutoCert+ credentials.
- 6. Receive a Logon (tag 35-MsgType=A) confirmation message.
- 7. Submit a Market Data Request (tag 35-MsgType=V) message.
- 8. Confirm that your application successfully received the <u>Market Data Incremental Refresh</u> (35=X) message that was requested in the <u>Market Data Request</u> (35=V) message.

Enter the following tag values:

- Price: tag 270-MDEntryPx
- Quantity: tag 271-MDEntrySize

5	Confirm that your application successfully received the incremental message that was requested in the TCP Market Data Request: Price (tag 270-MDEntryPX): Size (tag 271-MDEntrySize): Submit	•	Pending
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9. Receive and process a Logout message.

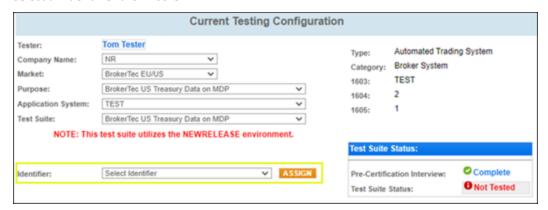
Consolidated Book Management for RV Curve with Implied

The purpose of this test is to verify that your application can properly process BrokerTec RV Curve market data messages.

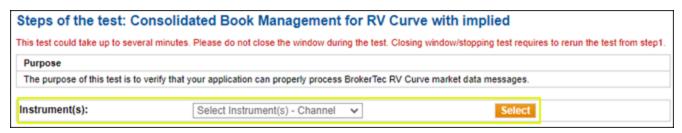


To run the consolidated book management - RV Curve test:

Select an Identifier then ASSIGN.



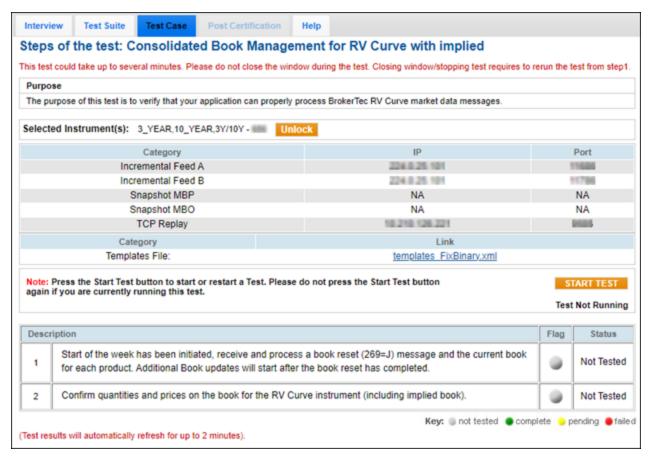
2. Select an Instrument.



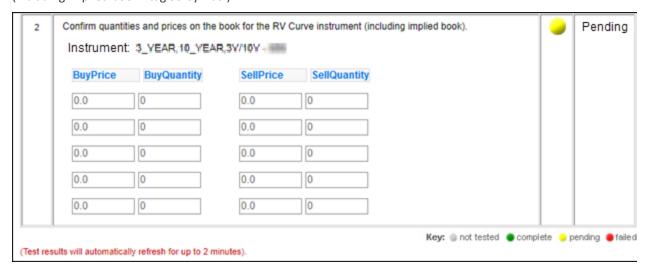
3. Click START TEST and REFRESH.

Note: DO NOT select the START TEST button once the test is in progress. If a test is not proceeding to the next step, selecting the Refresh button may resolve the issue.

4. Start of the week is initiated, receive and process a book reset (tag 35-MsgType=X, tag 55-Symbol, tag 269-MDEntryType=J) message and the current book for each product. Additional Book updates will start after the book reset has completed.



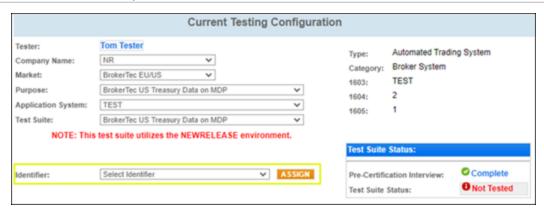
5. Confirm *quantities* (→271-MDEntrySize) and *prices* (→270-MDEntryPx) on the book for the RV Curve *instrument* (including implied book - tag 55-Symbol).



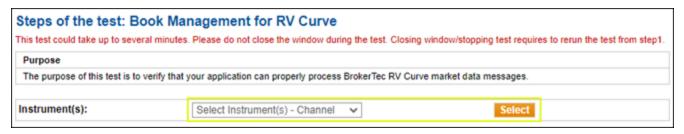
Book Management for RV Curve

The purpose of this test is to verify that your application can properly process BrokerTec RV Curve market data messages.

1. Select an Identifier then ASSIGN.



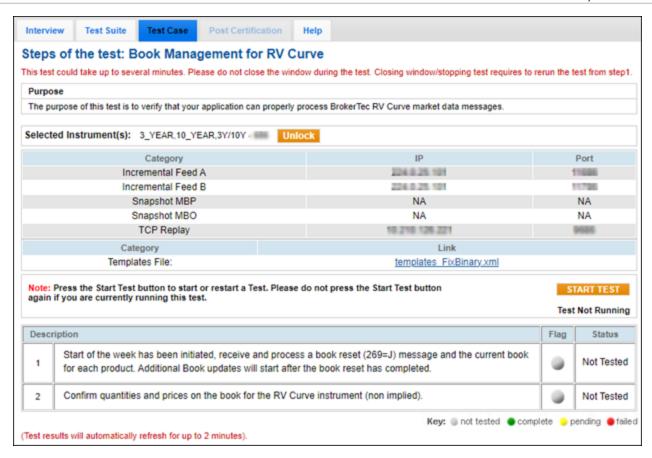
2. Select an Instrument.



3. Click START TEST and REFRESH.

Note: DO NOT select the START TEST button once the test is in progress. If a test is not proceeding to the next step, selecting the Refresh button may resolve the issue.

4. Start of the week is initiated, receive and process a book reset (tag 35-MsgType=X, tag 55-Symbol, tag 269-MDEntryType=J) message and the current book for each product. Additional Book updates will start after the book reset has completed.



5. Confirm *quantities* (→271-MDEntrySize) and *prices* (→270-MDEntryPx) on the book (for a Book Entry– order quantity) for the (non implied) RV Curve *instrument* (tag 55-Symbol).

