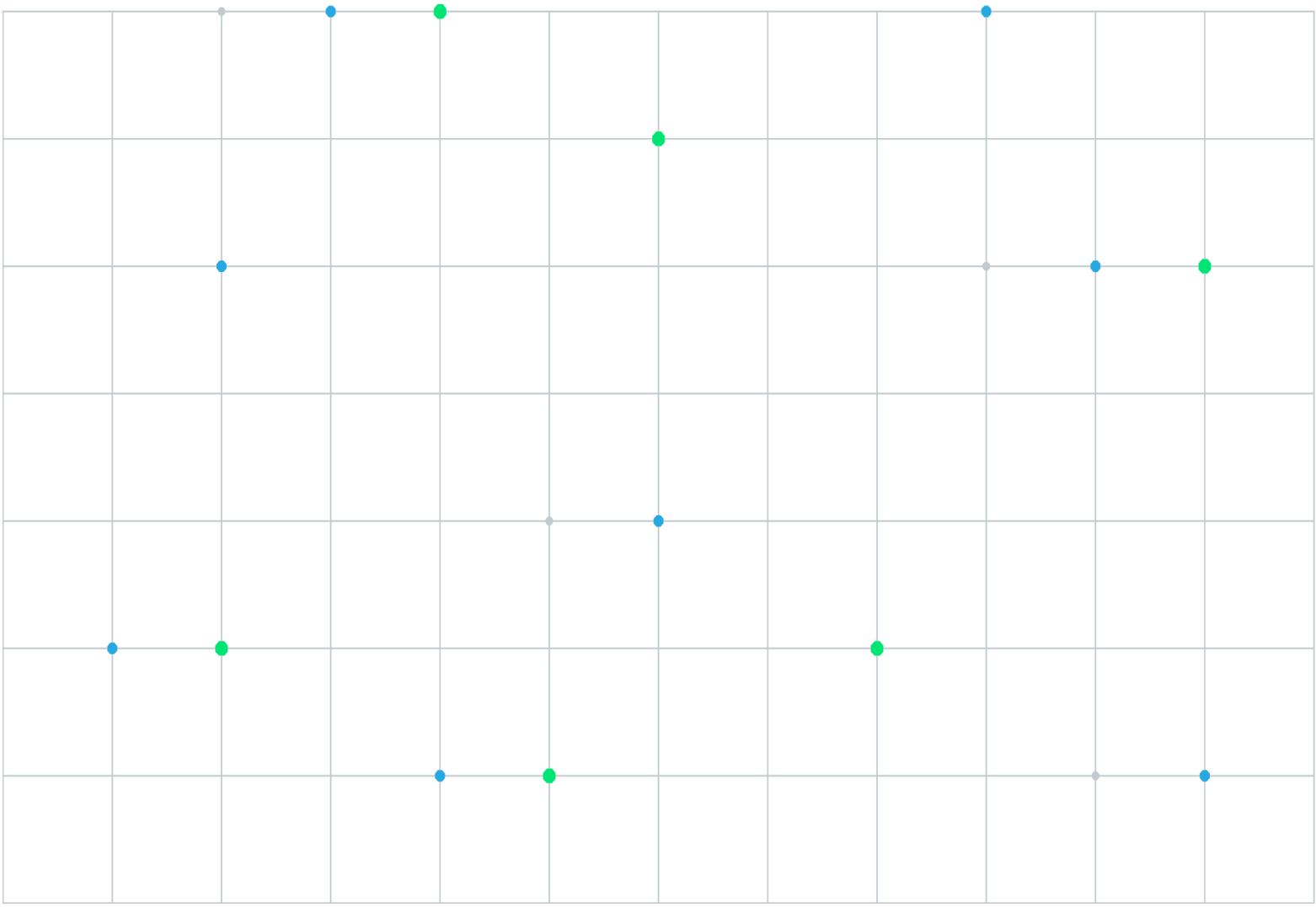
CME Group

AutoCert+ EBS Conflated Ultra User Manual

24 October 2022



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

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 All matters pertaining to rules and specifications herein are made subject to and are superseded by official CME, CBOT and NYMEX rules.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

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Getting Started

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

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

This Help system accompanies the AutoCert+ EBS Conflated Ultra test suite.

To run and navigate AutoCert+:

1. Complete the steps detailed in the "Process Summary - EBS New Release Testing Setup" topic.
2. Log into the automated certification tool.
3. Review general AutoCert+ test suite navigation and general interview information.
4. Navigate to the AutoCert+ EBS Conflated Ultra test suite.
    a. Select a **Company Name**.
    b. For **Market**, select "EBS."
    c. For **Purpose**, select "Market Data Conflated Ultra."
    d. Select an **Application System**.
    e. For **Test Suite**, select "EBS Conflated Ultra."
5. Select an **SenderComp** then select **ASSIGN**.
6. Complete the Interview for this test suite.
7. Complete applicable test cases.
8. Complete the certification process from the Post Certification tab.

What's New

The list below illustrates the updates made to the AutoCert+ EBS Conflated Ultra Help system.

Date	Topic	Description
October 24, 2022	Format	Website and PDF format changes only.
September 28, 2022	Interview	Updated with new interview questions for the EBS Conflated Ultra (UDP/TCP) Participation test suite enhancements
September 28, 2022	*Conflated UDP* Test cases	Renamed tests to differentiate from TCP tests
September 28, 2022	*Conflated TCP* Test cases	Added new tests for the EBS Conflation TCP test suite
September 14, 2022	Security Definition	New test case "Security Definition Message for NDF" replaces "Security Definition Message for On-MTF NDF"
September 14, 2022	Interview	Removed interview question "Will your system support On-MTF NDF?"
June 17, 2022	Security Definition Message for NDF	The Security Definition Message for NDF test case overlaps Security Definition Message for On-MTF NDF and has been removed.
June 2, 2022	TCP Replay Recovery	New test case
May 24, 2021		Initial release

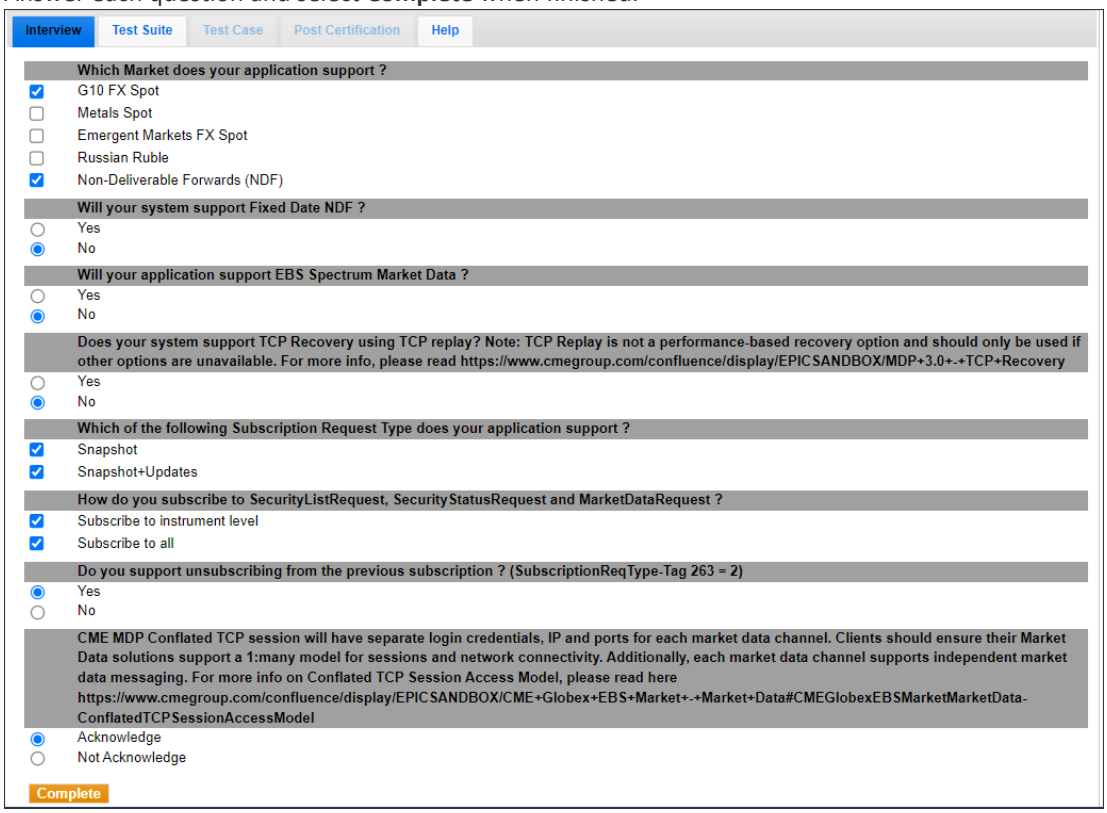
Interview

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.

Note: You cannot access test suites and test cases until the completion of the interview.

To complete the interview:

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



Certification Tests

This section contains information on the certification tests.

Conflated UDP Security Definition Message

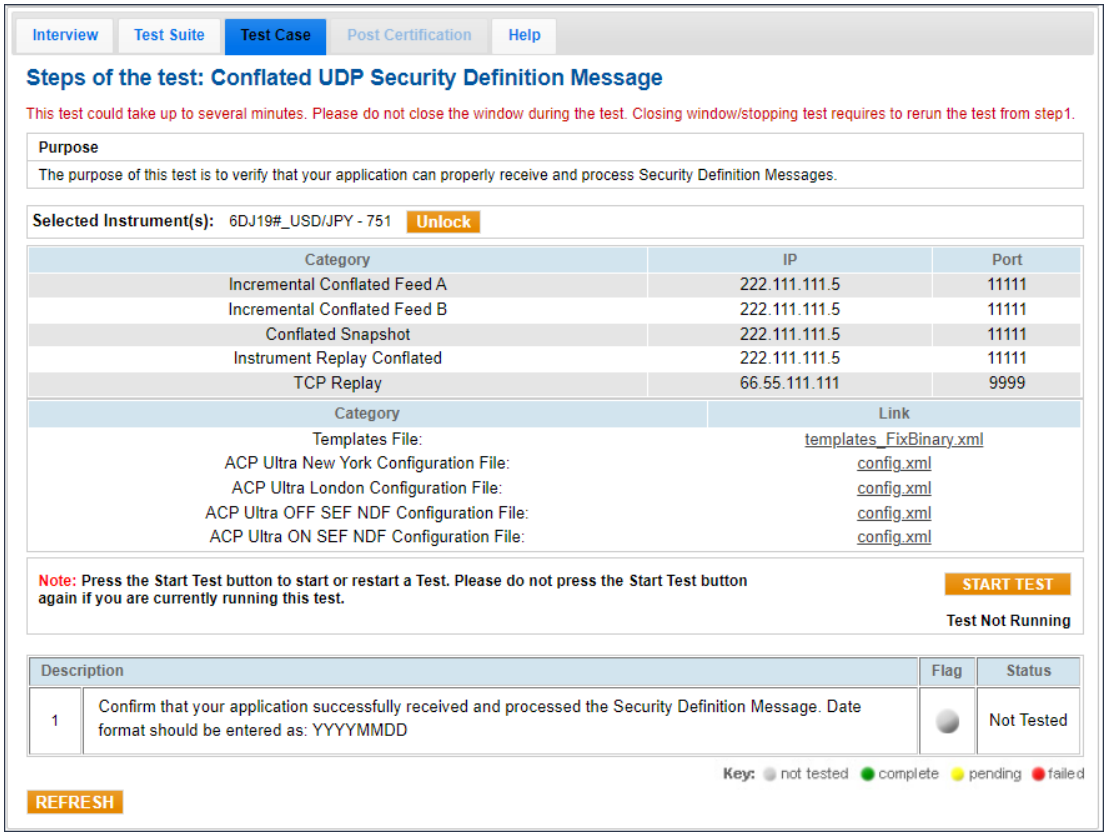
This test verifies that your application can properly receive and process Security Definition (tag 35-MsgType=d) messages.

Note: This test is used for Security Definition Message, including Non-Deliverable Forwards (NDF). The image below shows the non-NDF version of the test.

For additional information, see CME Globex EBS Market - Market Data Message Specification.

1. Select a **SenderComp** from the drop-down and select **ASSIGN** if a SenderComp is not already assigned.
2. From the **Instruments** drop-down, then **Select**, if the contract is not already locked.
3. Select the **START TEST** button.

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



To run a Security Definition test:

1. Confirm that your application successfully received and processed the Security Definition (tag 35-MsgType=d) message.

   The date format should be entered as: YYYYMMDD.

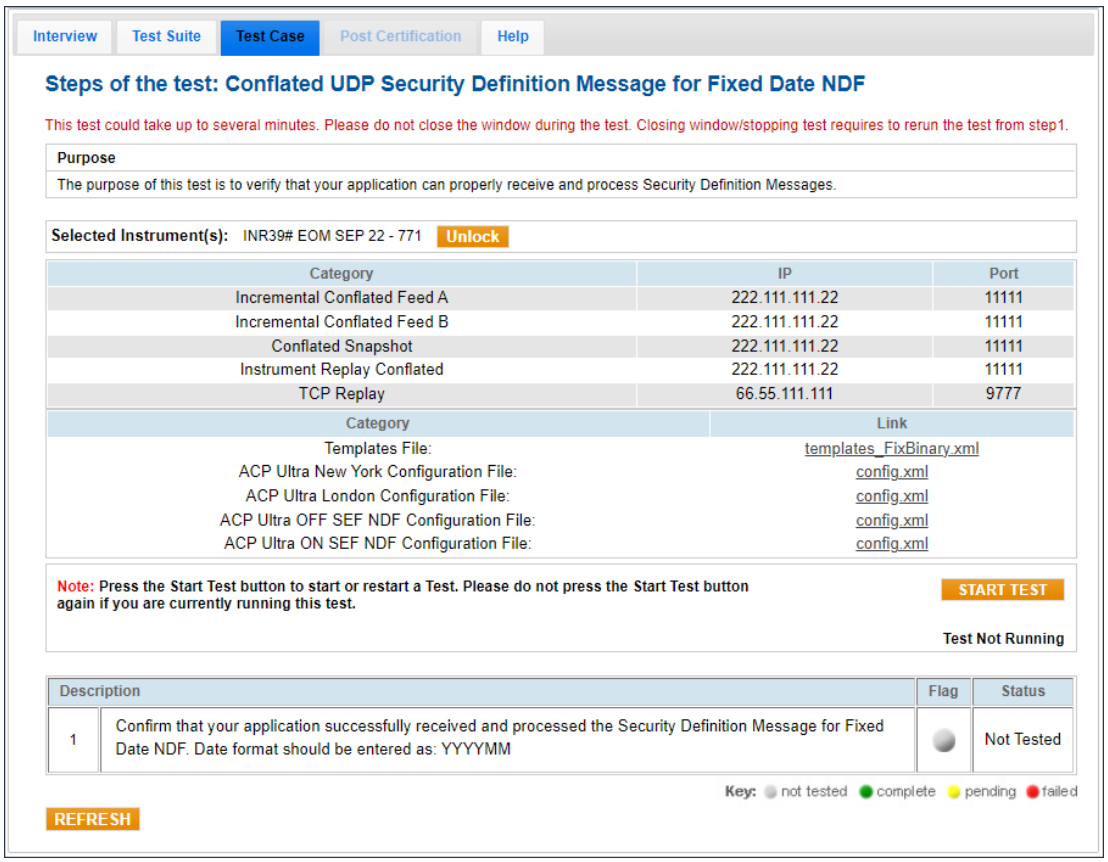
Conflated UDP Security Definition Message for Fixed Date NDF

This test verifies that your application can properly receive and process Security Definition (tag 35-MsgType=d) messages for Fixed Date NDF.

For additional information, see CME Globex EBS Market - Market Data Message Specification.

1. Select a **SenderComp** from the drop-down and select **ASSIGN** if a SenderComp is not already assigned.
2. From the **Instruments** drop-down, then **Select**, if the contract is not already locked.
3. Select the **START TEST** button.

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



To run a Security Definition Message for Fixed Date NDF test:

1. Confirm that your application successfully received and processed a Security Definition (tag 35-MsgType=d) message for Fixed Date NDF.

   Verify the values on the selected instrument Security Definition (tag 35-MsgType=d) message received.

   The date format should be entered as: YYYYMMDD.

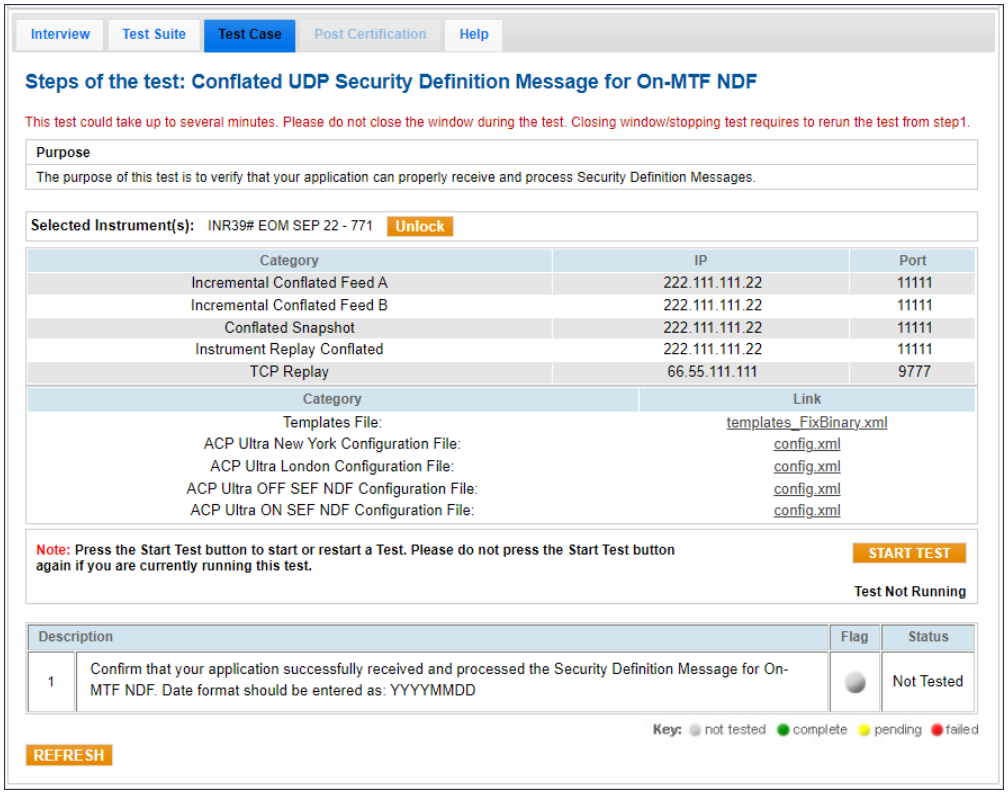
Conflated UDP Security Definition Message for On-MTF NDF

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

For additional information, see CME Globex EBS Market - Market Data Message Specification.

1. Select a **SenderComp** from the drop-down and select **ASSIGN** if a SenderComp is not already assigned.
2. From the **Instruments** drop-down, then **Select**, if the contract is not already locked.
3. Select the **START TEST** button.

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



To run a Security Definition Message for On-MTF NDF test:

1. Confirm that your application successfully received and processed the Security Definition (tag 35-MsgType=d) message for On-MTF NDF.
2. Verify the values on the selected instrument Security Definition (tag 35-MsgType=d) message received by entering responses for:
   - tag 63 - SettlType
   - In the repeating group: First MaturityDate

     Note: The date format should be entered as: YYYYMMDD.

   - In the repeating group: First Security Alt ID

	Description	Flag	Status
1	Confirm that your application successfully received and processed the Security Definition Message for On-MTF NDF. Date format should be entered as: YYYYMMDD Instrument: PHP49#_ PHP 1M - 771 Security ID: 12345678 SettlType : First MaturityDate in the repeating group : First Security Alt ID in the repeating group : Submit		Pending

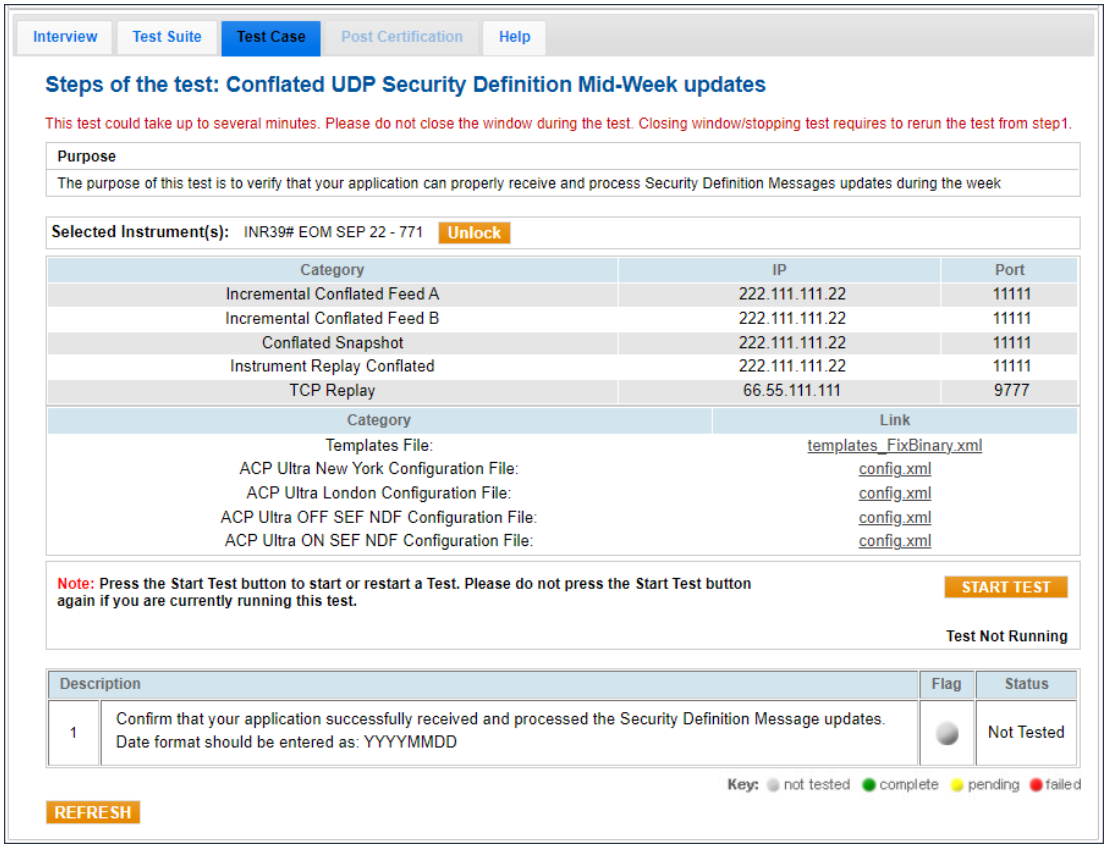
Conflated UDP Security Definition Mid-Week Updates

This test verifies that your application can properly receive and process Security Definition (tag 35-MsgType=d) message updates during the week.

For additional information, see CME Globex EBS Market - Market Data Message Specification.

1. Select a **SenderComp** from the drop-down and select **ASSIGN** if a SenderComp is not already assigned.
2. From the **Instruments** drop-down, then **Select**, if the contract is not already locked.
3. Select the **START TEST** button.

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



To run a Security Definition Mid-Week Updates test:

1. Confirm that your application successfully received and processed the Security Definition (tag 35-MsgType=d) message.

   The date format should be entered as: YYYYMMDD.

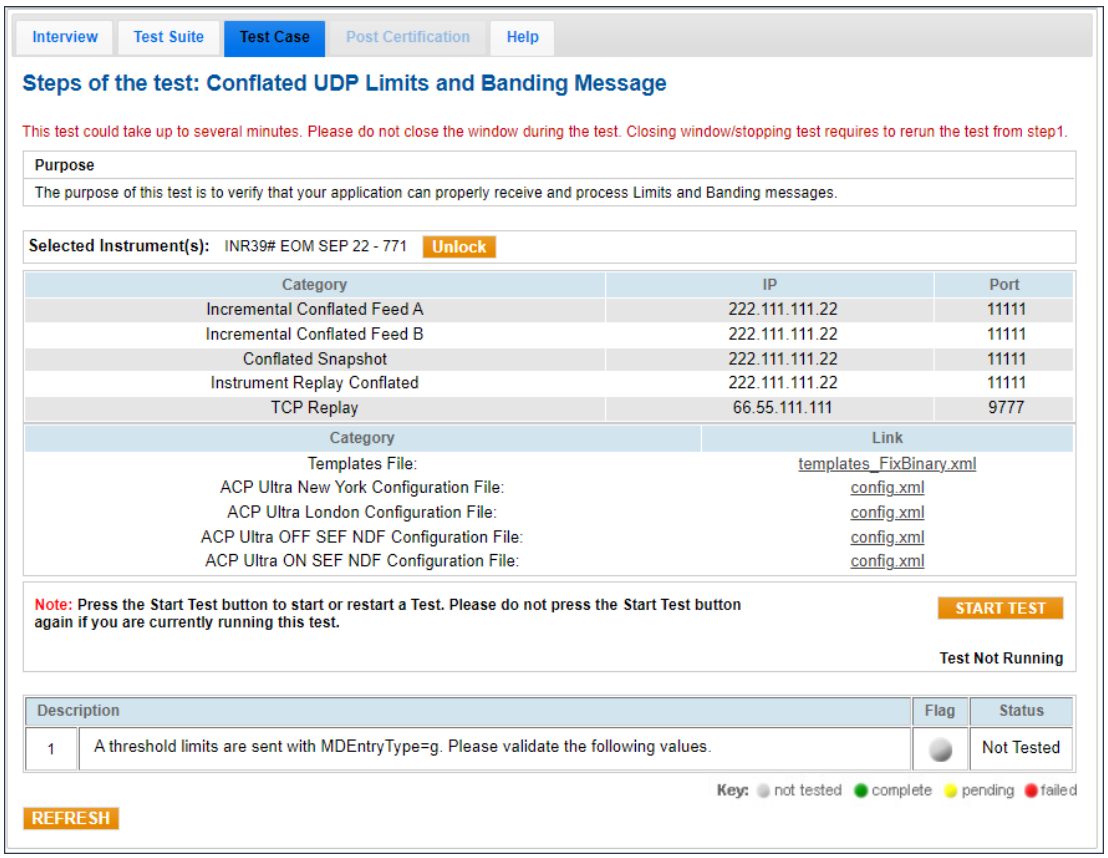
Conflated UDP Limits and Banding Message

The purpose of this test is to verify that your application can properly receive and process Market Data Incremental Refresh (tag 35-MsgType=X) - Limits and Banding messages.

For additional information, see CME Globex EBS Market - Market Data Message Specification.

1. Select a **SenderComp** from the drop-down and select **ASSIGN** if a SenderComp is not already assigned.
2. From the **Instruments** drop-down, then **Select**, if the contract is not already locked.
3. Select the **START TEST** button.

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



To run the Limits and Banding Message test:

1. Threshold limits are sent with Limits and Banding (MDEntryType=g).

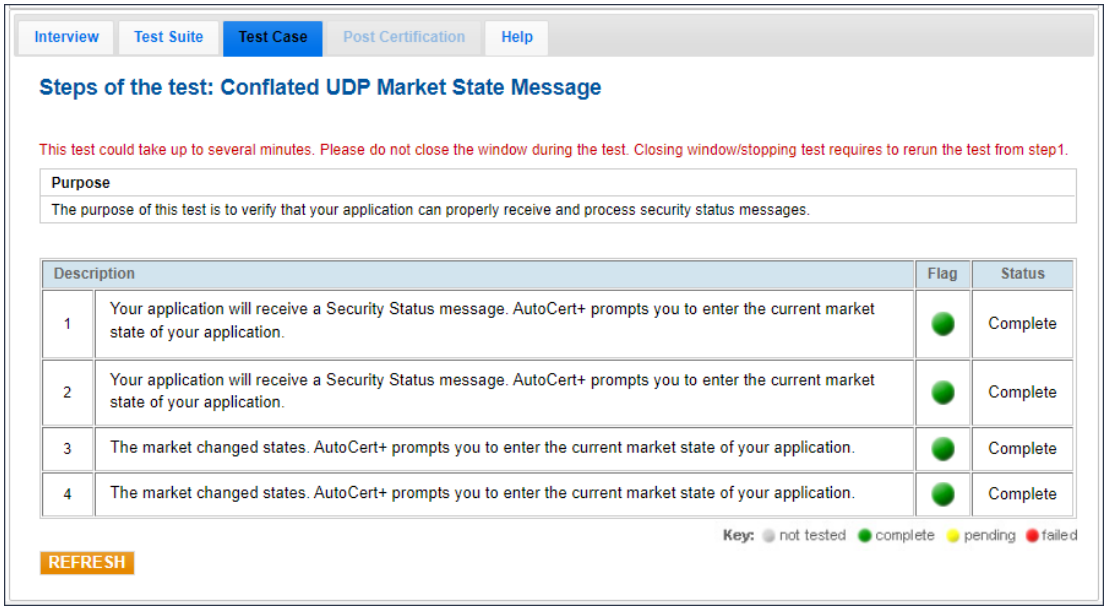
   Validate the tag values.

Conflated UDP Market State Message

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

1. Select a **SenderComp** from the drop-down and select **ASSIGN** if a SenderComp is not already assigned.
2. From the **Instruments** drop-down, then **Select**, if the contract is not already locked.
3. Select the **START TEST** button.

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



To run the Market State Message test:

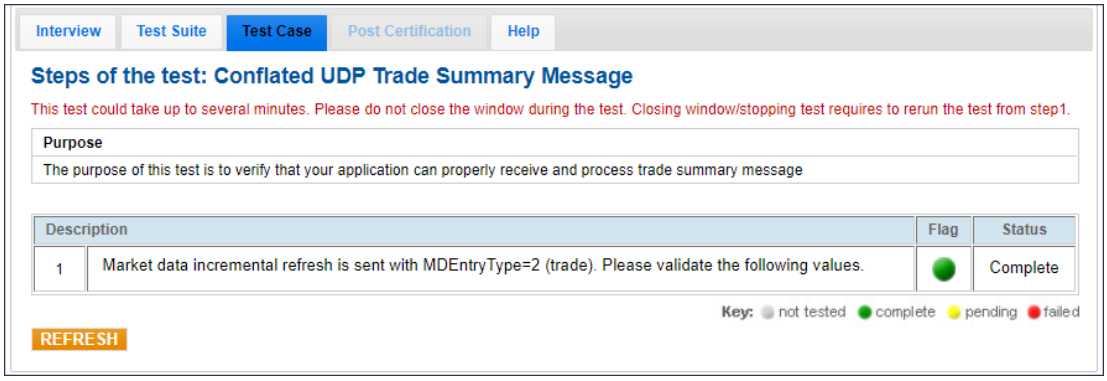
1. Enter the current market state from the security status message that your application received.
2. Enter the current market state from the security status message that your application received.
3. The market changed states. Enter the current market state from the security status message that your application received.
4. The market changed states. Enter the current market state from the security status message that your application received.

Conflated UDP Trade Summary Message

The purpose of this test is to verify that your application can properly receive and process a Market Data Incremental Refresh (tag 35-MsgType=X) Trade Summary message.

1. Select a **SenderComp** from the drop-down and select **ASSIGN** if a SenderComp is not already assigned.
2. From the **Instruments** drop-down, then **Select**, if the contract is not already locked.
3. Select the **START TEST** button.

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



To run a Trade Summary Message test:

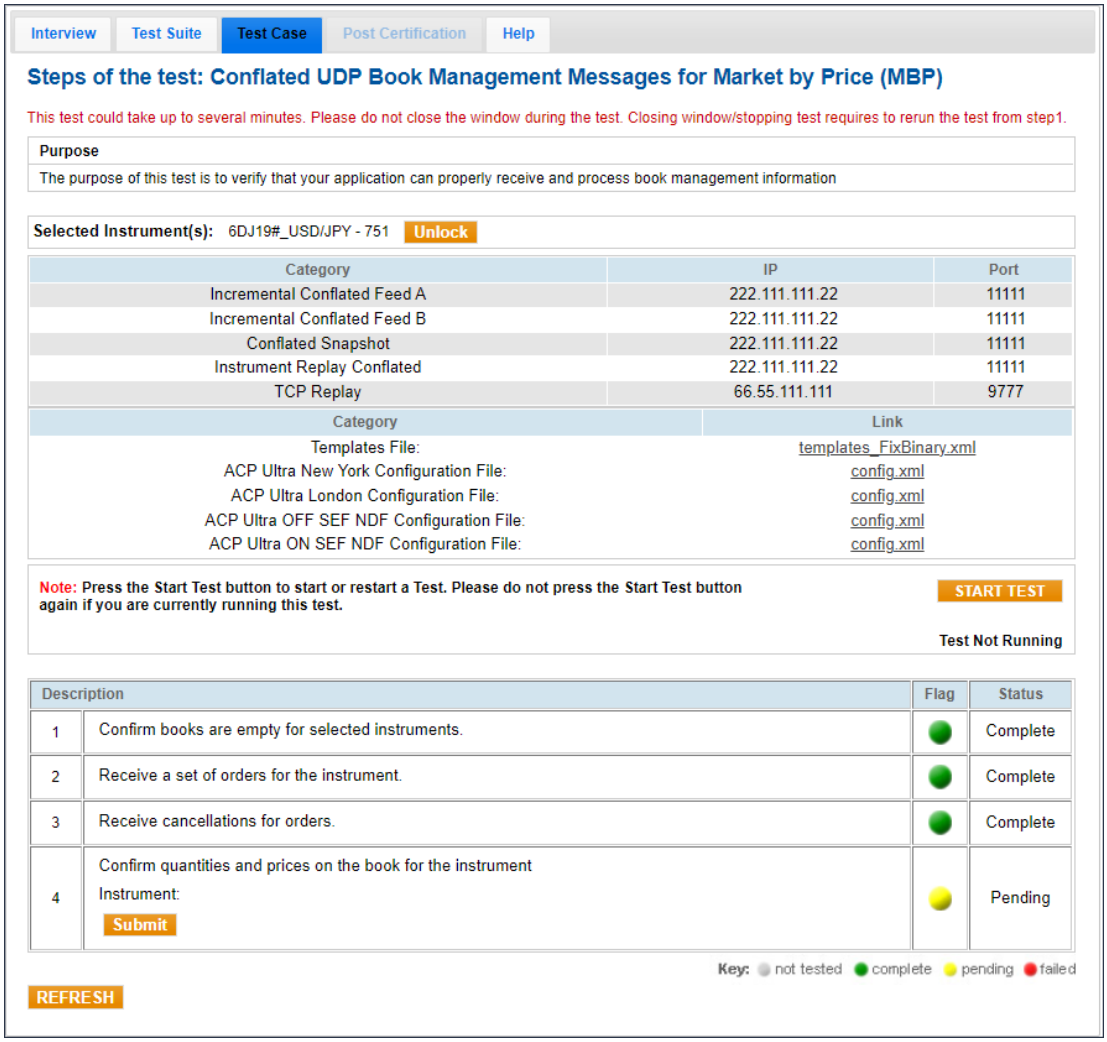
1. Enter the tag values from the Market Data Incremental Refresh (tag 35-MsgType=X) Trade Summary message with MDEntryType=2 (trade) message that your application received.

Conflated UDP Book Management Messages for Market by Price (MBP)

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

1. Select a **SenderComp** from the drop-down and select **ASSIGN** if a SenderComp is not already assigned.
2. From the **Instruments** drop-down, then **Select**, if the contract is not already locked.
3. Select the **START TEST** button.

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



To run a Book Management Messages for Market by Price (MBP) test:

1. Confirm that the books are empty for the selected instruments.
2. Receive a set of orders for the instrument.
3. Receive cancellations for orders.
4. Confirm the quantities and prices on the book for the selected instrument.

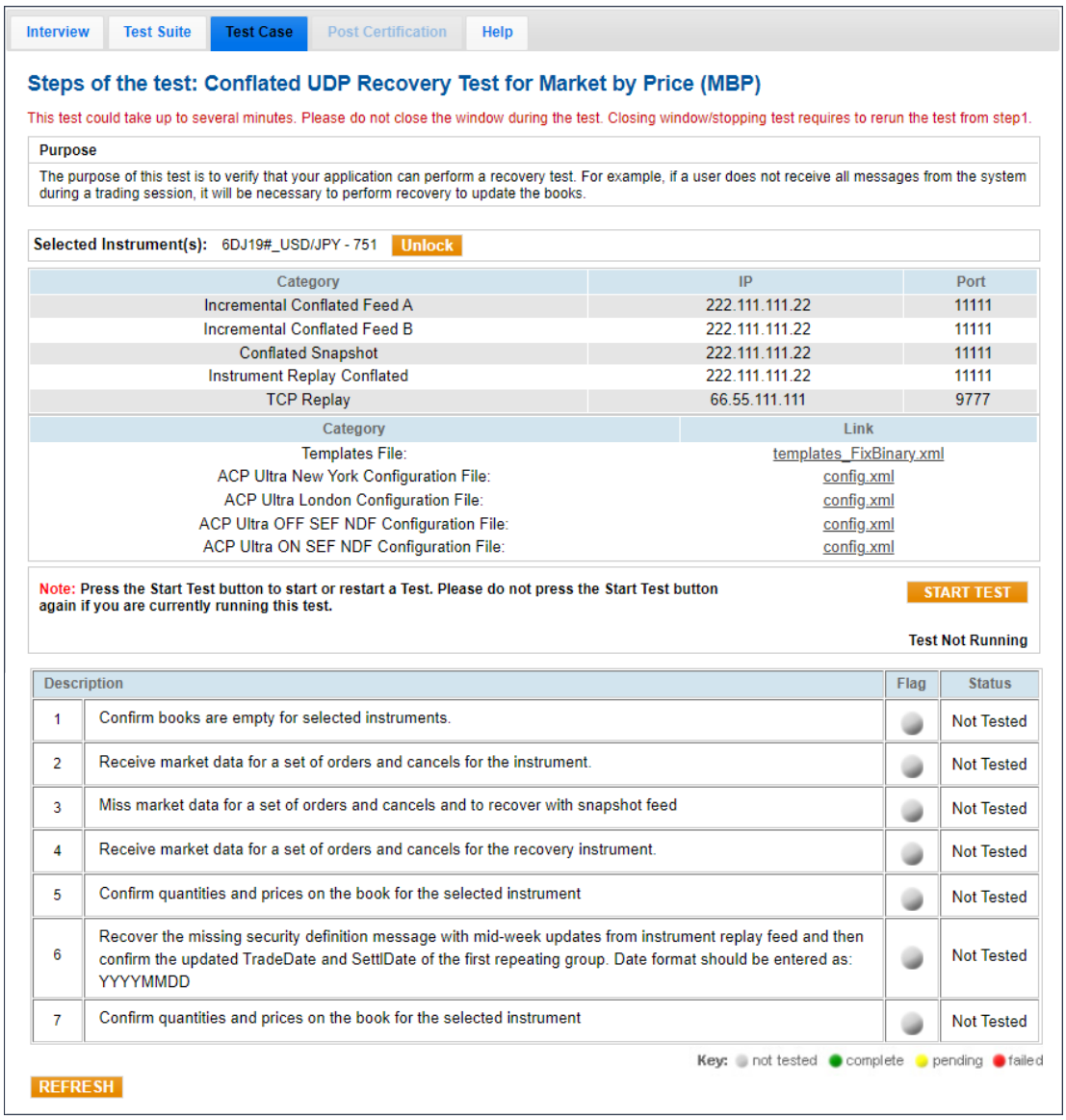
Conflated UDP Recovery Test for Market by Price (MBP)

This test verifies that your application can perform a recovery test. For example, if a user does not receive all messages from the system during a trading session, it will be necessary to perform a recovery to update the books.

For additional information, see CME Globex EBS Market - Market Data Message Specification.

1. Select a **SenderComp** from the drop-down and select **ASSIGN** if a SenderComp is not already assigned.
2. From the **Instruments** drop-down, then **Select**, if the contract is not already locked.
3. Select the **START TEST** button.

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



To run a Recovery Test for Market by Price (MBP) test:

1. Confirm that the books are empty for the selected instruments.
2. Receive market data for a set of orders and cancels for the instrument.
3. Miss market data for a set of orders and cancels and to recover with snapshot feed.
4. Receive market data for a set of orders and cancels for the recovery instrument.
5. Confirm the quantities and prices on the book for the selected instrument.
6. Recover the missing Security Definition (tag 35-MsgType=d) message with mid-week updates from the instrument replay feed and then confirm the updated TradeDate and SettlDate of the first repeating group. The date format should be entered as: YYYYMMDD.
7. Confirm the quantities and prices on the book for the selected instrument.

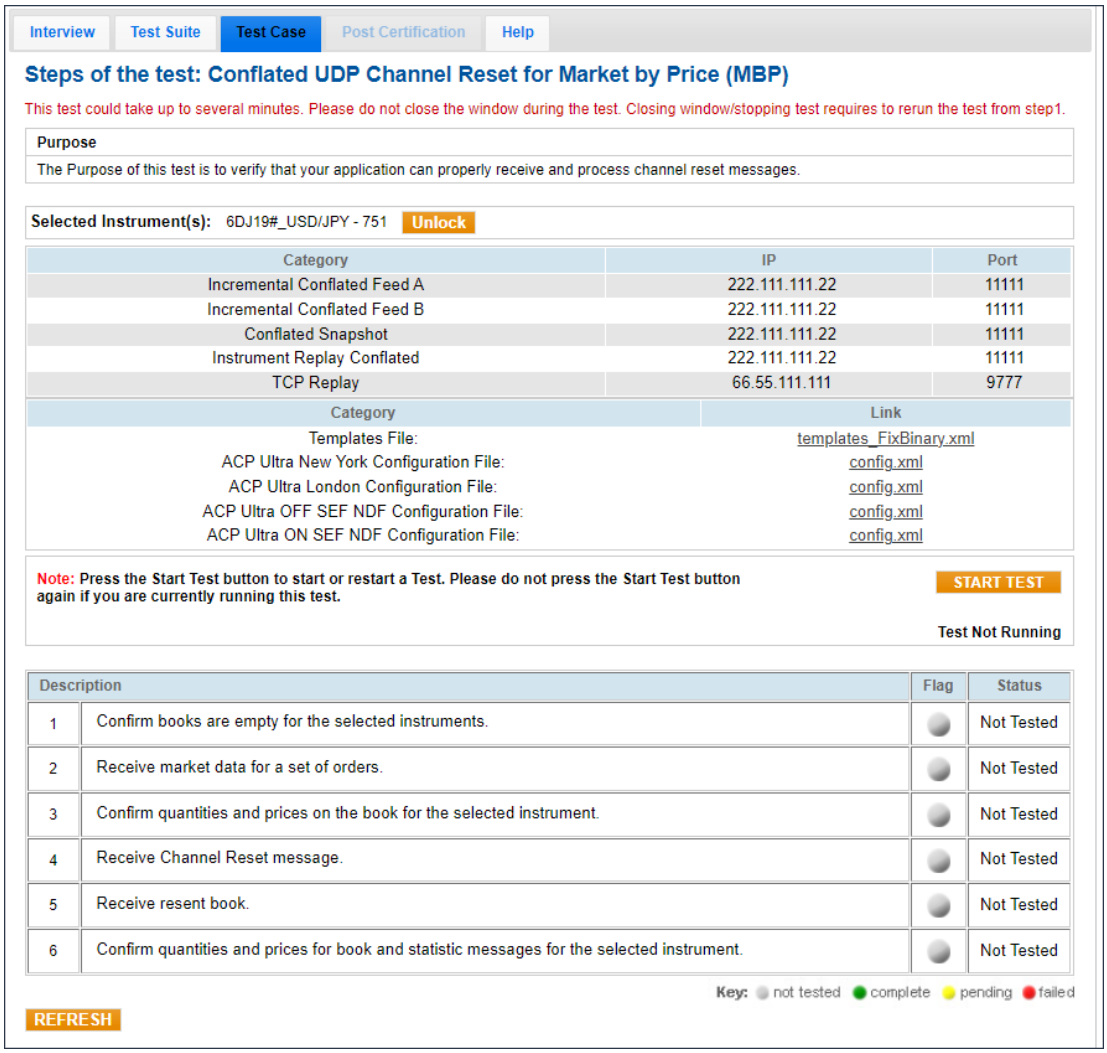
Conflated UDP Channel Reset for Market by Price (MBP)

This test verifies that your application can properly receive and process channel reset messages.

For additional information, see CME Globex EBS Market - Market Data Message Specification.

1. Select a **SenderComp** from the drop-down and select **ASSIGN** if a SenderComp is not already assigned.
2. From the **Instruments** drop-down, then **Select**, if the contract is not already locked.
3. Select the **START TEST** button.

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



To run a Channel Reset for Market by Price (MBP) test:

1. Confirm books are empty for the selected instruments.
2. Receive market data for a set of orders.
3. Confirm the quantities and prices on the book for the selected instrument.
4. Receive a Market Data Incremental Refresh (tag 35-MsgType=X) - Channel Reset message.

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

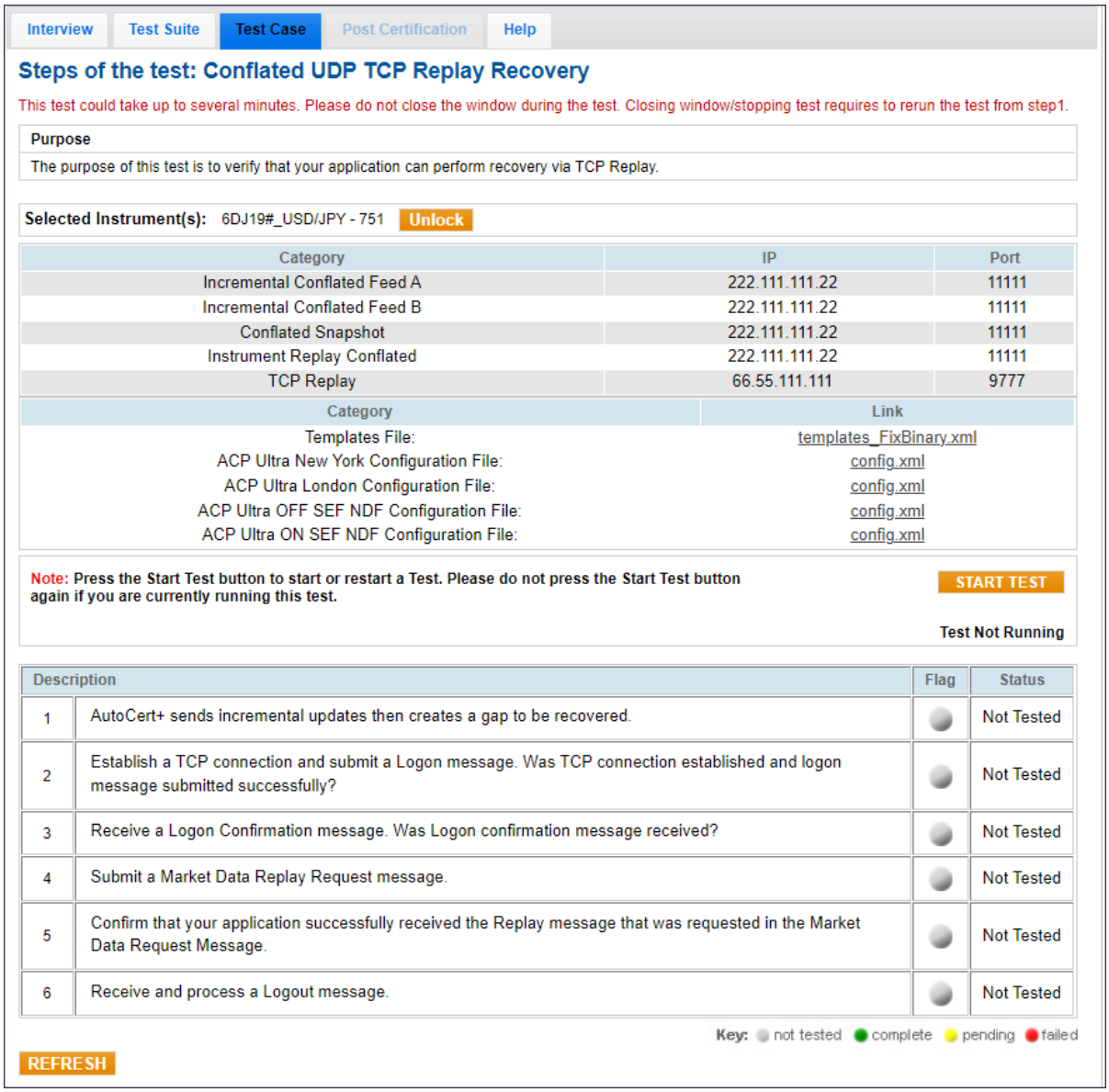
TCP Replay Recovery

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

For additional details, see the CME Globex EBS Market - Market Data Message Specification and MDP 3.0 TCP Recovery.

1. Select a **SenderComp** from the drop-down and select **ASSIGN** if a SenderComp is not already assigned.
2. From the **Instruments** drop-down, then **Select**, if the contract is not already locked.
3. Select the **START TEST** button.

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



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 message.

   Select (**Yes** or **No**) to indicate whether the TCP connection was established and a logon message was submitted successfully.
3. Receive a Logon Confirmation message.

   Select (**Yes** or **No**) to indicate whether a Logon confirmation message was received.
4. Submit a Market Data Replay Request message.
5. Confirm that your application successfully received the replay message (35=X) that was requested in the Market Data Replay Request message (35=V) by entering the following tag value:
   - **Price**: tag 270-MDEntryPx

6. Receive and process a Logout message.

Conflated TCP SecurityListRequest by All Request Verification

This test verifies that your system can properly request all entitled instruments.

For additional details, see MDP 3.0 - Message Specification

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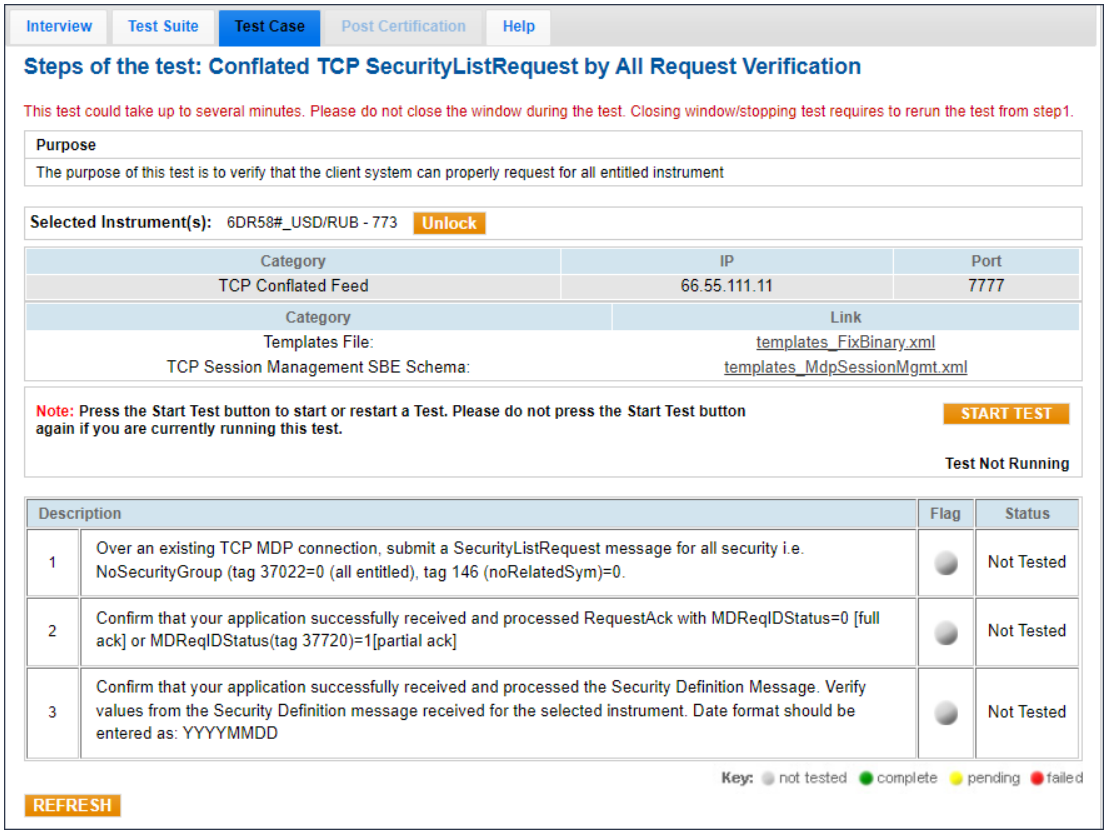

To run a Security List Request by All Request Verification test:

1. Over an existing TCP MDP connection, submit a Security List Request (tag 35-MsgType=x) message for all securities, i.e. NoSecurityGroup (tag 37022=0 (all entitled), tag 146 (noRelatedSym)=0.
2. Confirm that your application successfully received and processed a Request Acknowledgment message with MDReqIDStatus=0 [full ack] or MDReqIDStatus(tag 37720)=1[partial ack].
3. Confirm that your application successfully received and processed a Security Definition (tag 35-MsgType=d) message. Verify values from the first Security Definition (tag 35-MsgType=d) message received. The date format should be entered as: YYYYMMDD.
    - First tag 75-TradeDate in the repeating group
    - First tag 64-SettlDate in the repeating group
    - tag 55-Symbol
    - tag 1300-MarketSegmentID
4. Submit a Security List Request (tag 35-MsgType=x) message to unsubscribe from all subscriptions.

Conflated TCP SecurityListRequest by Instrument Level Request Verification

This test verifies that your system can properly request all entitled instruments at the instrument level.

For additional details, see MDP 3.0 - Message Specification

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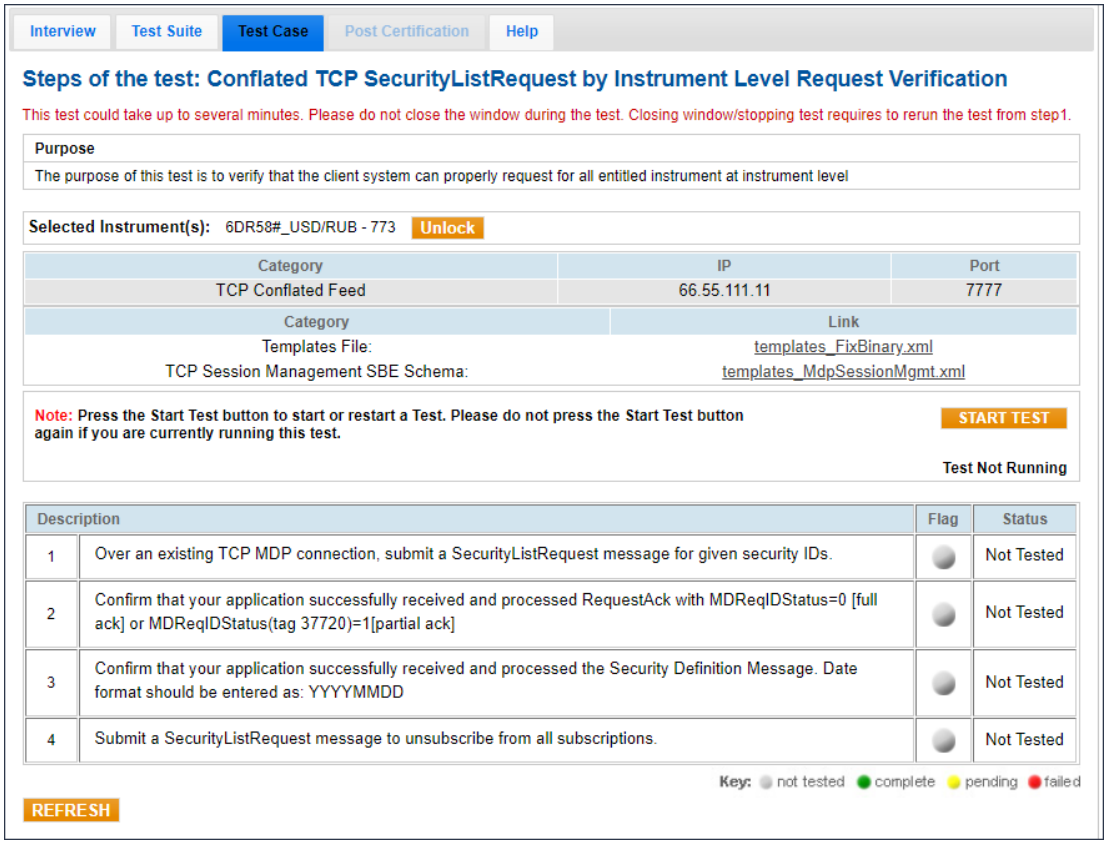

To run a Security List Request by Instrument Level Request Verification test:

1. Over an existing TCP MDP connection, submit a Security List Request (tag 35-MsgType=x) message for given security IDs.
2. Confirm that your application successfully received and processed a Request Acknowledgment (tag 35-MsgType=V) with MDReqIDStatus=0 [full ack] or MDReqIDStatus(tag 37720)=1[partial ack].
3. Confirm that your application successfully received and processed a Security Definition (tag 35-MsgType=d) message. The date format should be entered as: YYYYMMDD.
4. Submit a Security List Request (tag 35-MsgType=x) message to unsubscribe from all subscriptions.

Conflated TCP Security Definition Mid-Week Updates

This test verifies that your application can properly receive and process Security Definition (tag 35-MsgType=d) messages updates during the week.

For additional details, see MDP 3.0 - Message Specification

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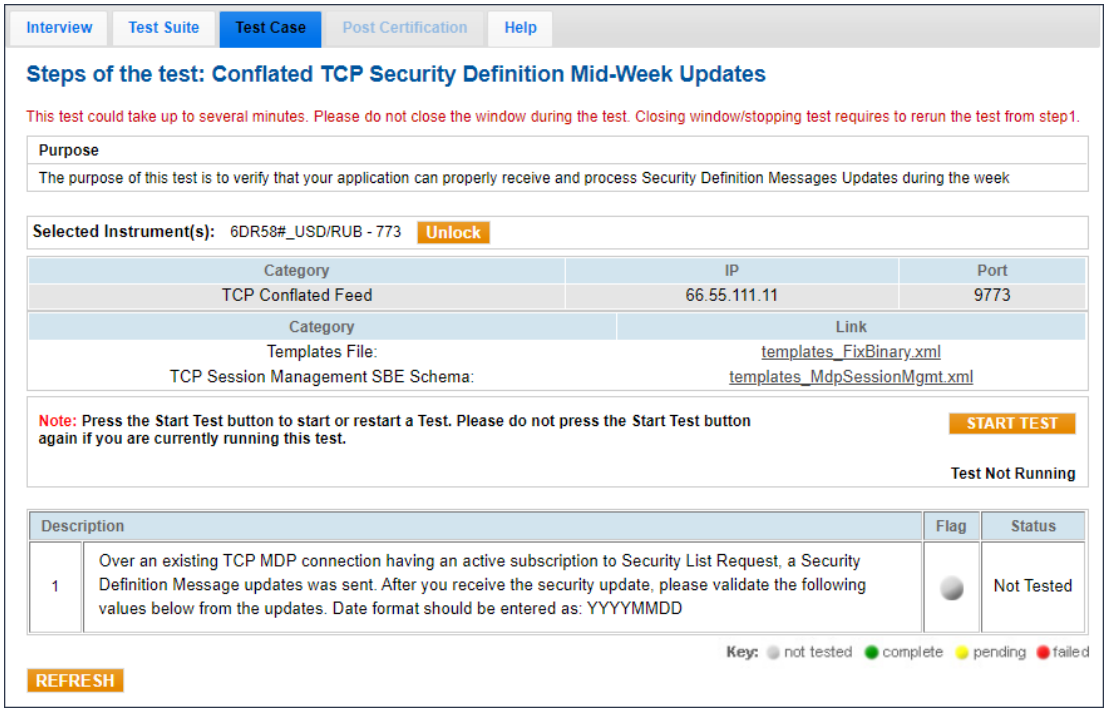

To run a Security Definition Mid-Week Updates test:

1. Over an existing TCP MDP connection having an active subscription to Security List Request (tag 35-MsgType=x), updates for a Security Definition (tag 35-MsgType=d) message were sent. After you receive the security update, verify the following values below from the updates. The date format should be entered as: YYYYMMDD

Conflated TCP Security Status Request Verification (Snapshot only)

This test verifies that your system can send and process a Security Status Request (35-MsgType=g) message.
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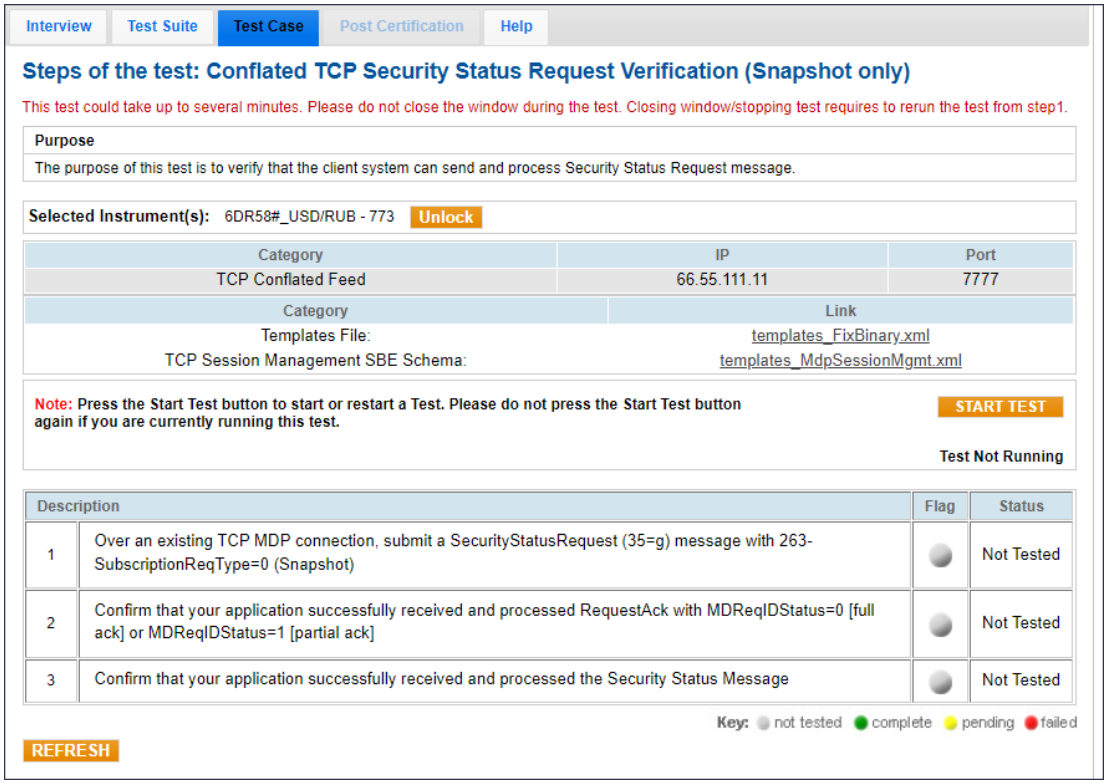

To run a Security Status Request Verification (Snapshot only) test:

1. Over an existing TCP MDP connection, submit a Security Status Request (35-MsgType=g) message with 263-SubscriptionReqType=0 (Snapshot).
2. Confirm that your application successfully received and processed a Request Acknowledgment (tag 35-MsgType=V) with MDReqIDStatus=0 [full ack] or MDReqIDStatus=1 [partial ack].
3. Confirm that your application successfully received and processed a security status message.

Conflated TCP Security Status Request Verification (Snapshot and Updates)

This test verifies that your system can send and process a Security Status Request (35-MsgType=g) message.

For additional details, see MDP 3.0 - Message Specification

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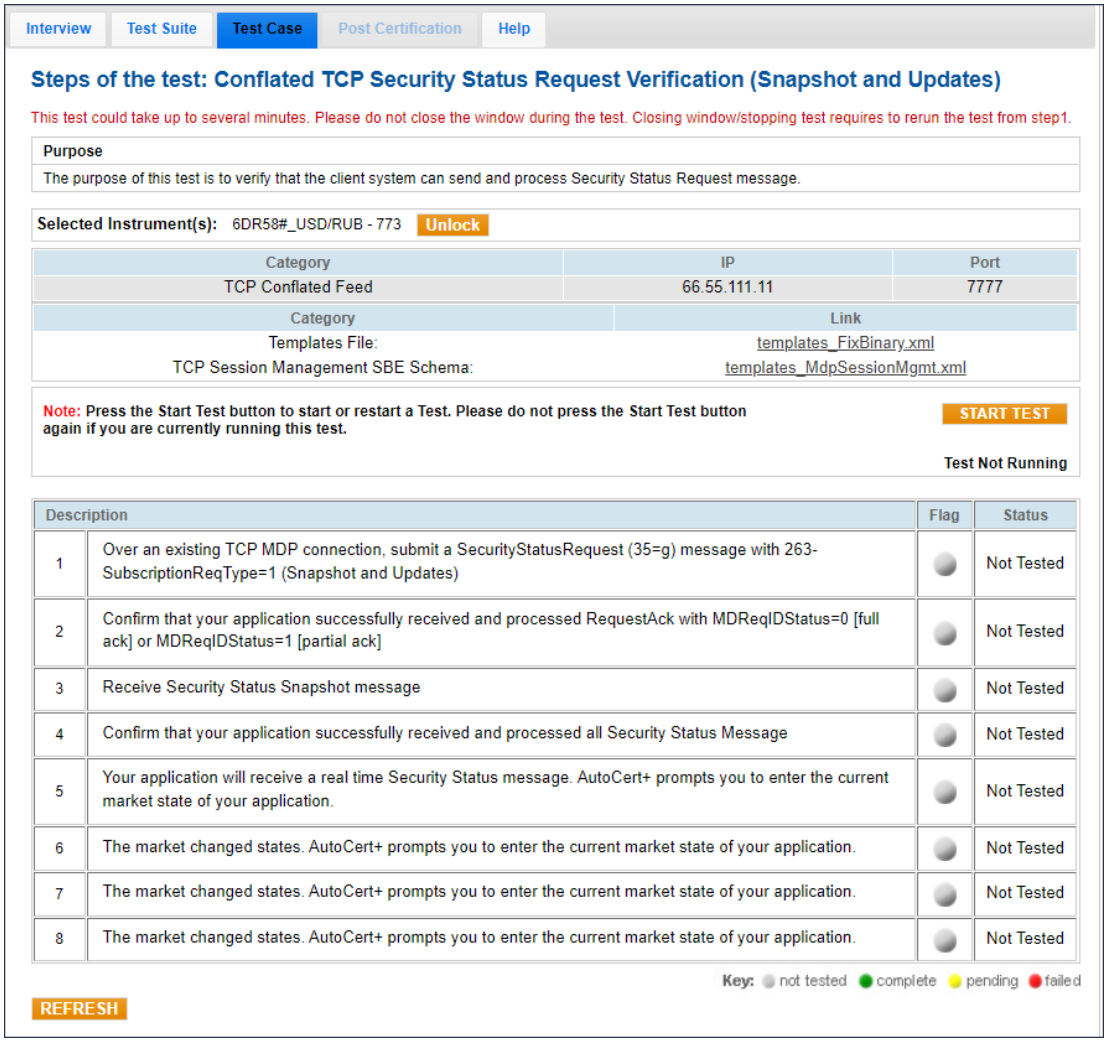

To run a Security Status Request Verification (Snapshot and Updates) test:

1. Over an existing TCP MDP connection, submit a Security Status Request (35-MsgType=g) message with 263-SubscriptionReqType=1 (Snapshot and Updates).
2. Confirm that your application successfully received and processed Request Acknowledgment (tag 35-MsgType=V) with MDReqIDStatus=0 [full ack] or MDReqIDStatus=1 [partial ack].
3. Receive a security status Snapshot (35-MsgType=W) message.
4. Confirm that your application successfully received and processed all security status message.
5. Your application will receive a real-time security status message. Enter the current market state of your application.
6. The market changed states. Enter the current market state of your application.
7. The market changed states. Enter the current market state of your application.
8. The market changed states. Enter the current market state of your application.

Conflated TCP Market Data Request by All Request Verification

This test verifies that your system can send and process a Market Data Request (tag 35-MsgType=V) message.

For additional details, see MDP 3.0 - Message Specification

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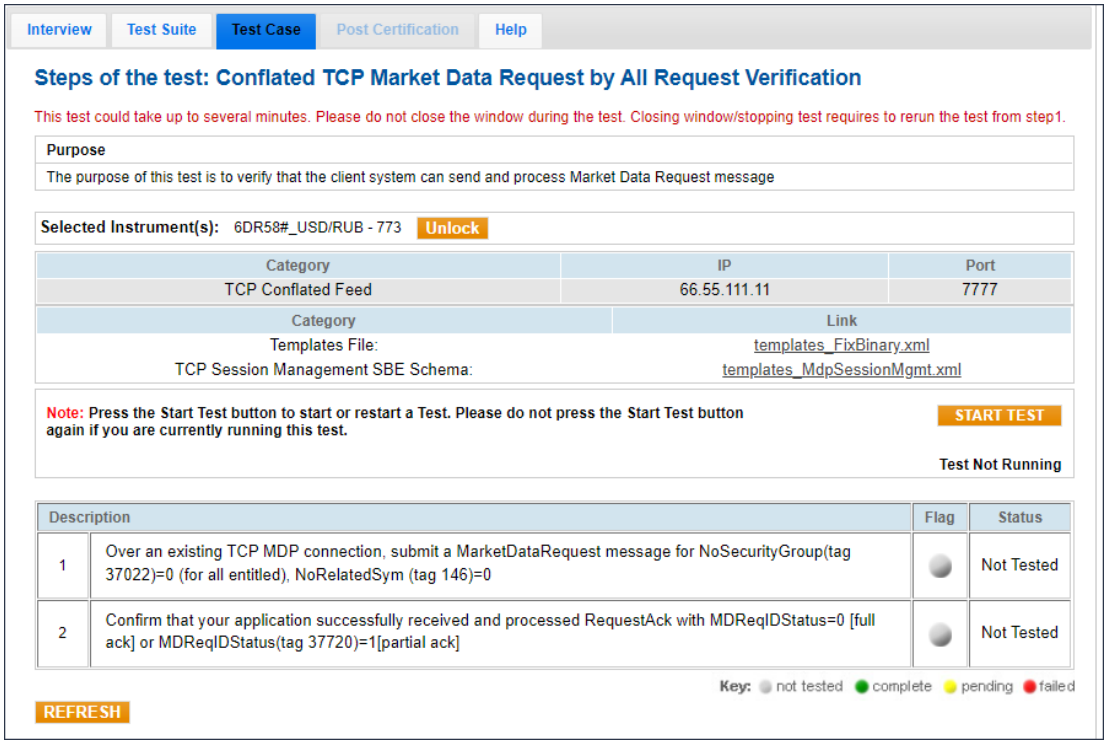

To run a Market Data Request by All Request Verification test:

1. Over an existing TCP MDP connection, submit a Market Data Request message for NoSecurityGroup(tag 37022)=0 (for all entitled), NoRelatedSym (tag 146)=0.
2. Confirm that your application successfully received and processed a Request Acknowledgment (tag 35-MsgType=V) message with MDReqIDStatus=0 [full ack] or MDReqIDStatus(tag 37720)=1[partial ack].

Conflated TCP Market Data Request by Instrument Level Request Verification (Snapshot only)

This test verifies that your system can send and process a Market Data Request (tag 35-MsgType=V) message.

For additional details, see MDP 3.0 - Message Specification

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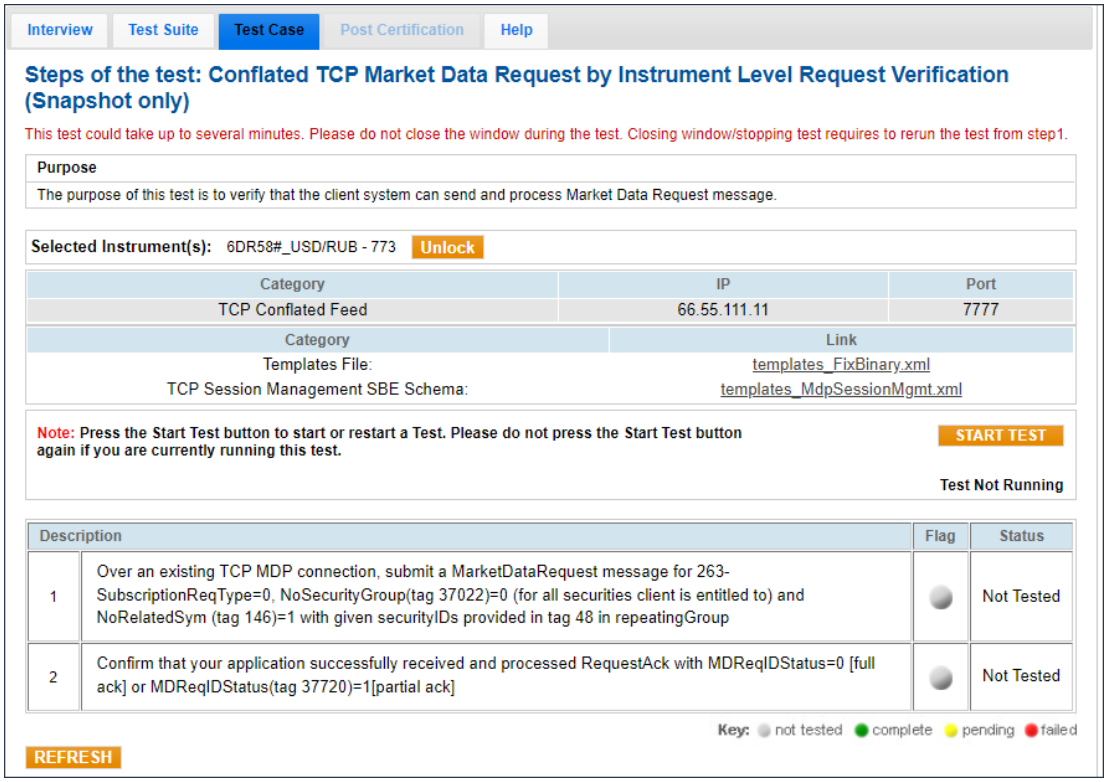


To run a Market Data Request by Instrument Level Request Verification (Snapshot only) test:

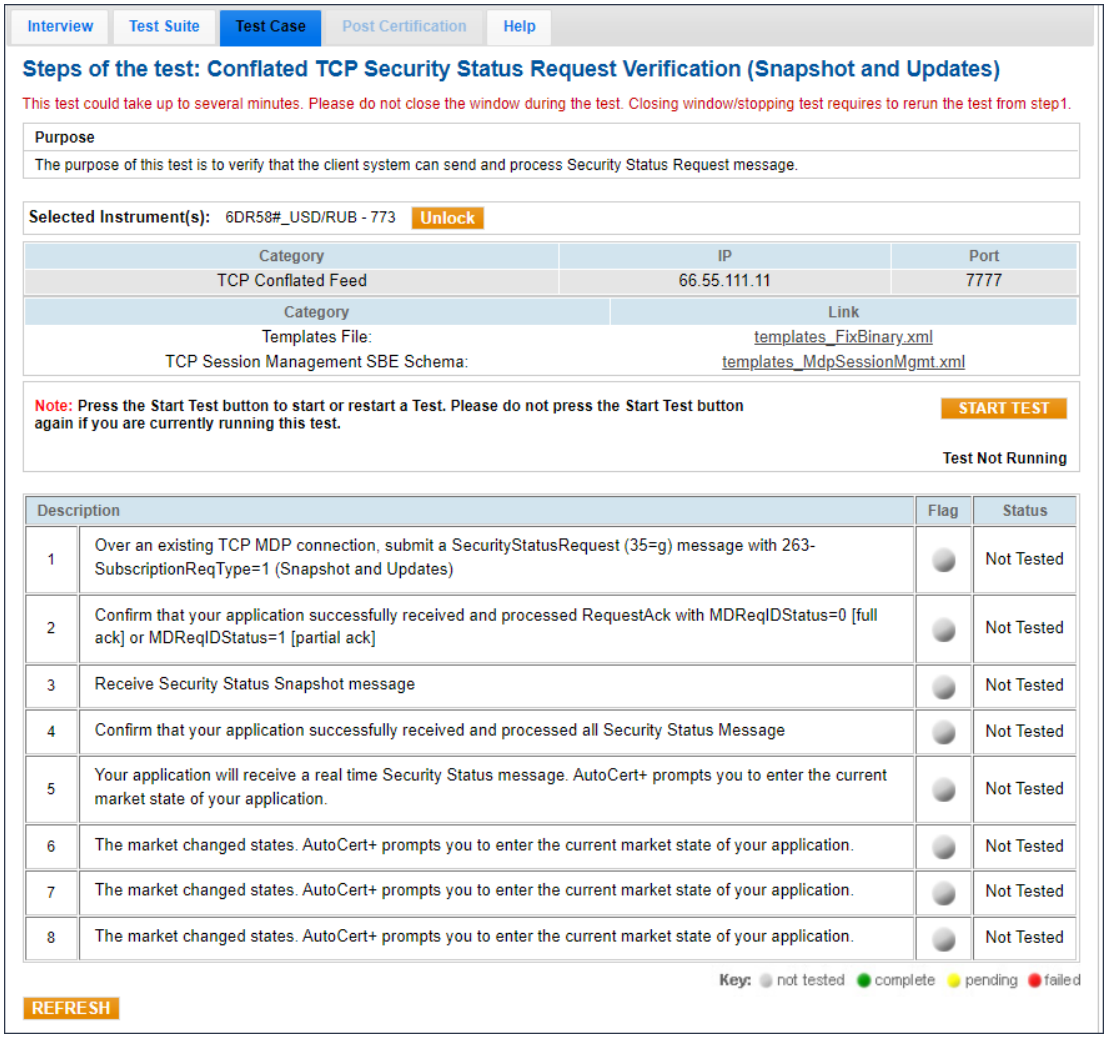
1. Over an existing TCP MDP connection, submit a Market Data Request (tag 35-MsgType=V) message for 263-SubscriptionReqType=0, NoSecurityGroup(tag 37022)=0 (for all securities client is entitled to) and NoRelatedSym (tag 146)=1 with given security IDs provided in tag 48 in the repeating group.
2. Confirm that your application successfully received and processed a Request Acknowledgment (tag 35-MsgType=V) with MDReqIDStatus=0 [full ack] or MDReqIDStatus(tag 37720)=1[partial ack].

Conflated TCP Market Data Request by Instrument Level Request Verification (Snapshot and Updates)

This test verifies that your system can send and process a Security Status Request (35-MsgType=g) message.

For additional details, see MDP 3.0 - Message Specification

(missing or bad snippet)



To run a Security Status Request Verification (Snapshot and Updates) test:

1. Over an existing TCP MDP connection, submit a Security Status Request (35-MsgType=g) message with 263-SubscriptionReqType=1 (Snapshot and Updates).
2. Confirm that your application successfully received and processed Request Acknowledgment (tag 35-MsgType=V) with MDReqIDStatus=0 [full ack] or MDReqIDStatus=1 [partial ack].
3. Receive a security status Snapshot (35-MsgType=W) message.
4. Confirm that your application successfully received and processed all security status message.
5. Your application will receive a real-time security status message. AutoCert+ prompts you to enter the current market state of your application.
6. The market changed states. AutoCert+ prompts you to enter the current market state of your application.
7. The market changed states. AutoCert+ prompts you to enter the current market state of your application.
8. The market changed states. AutoCert+ prompts you to enter the current market state of your application.