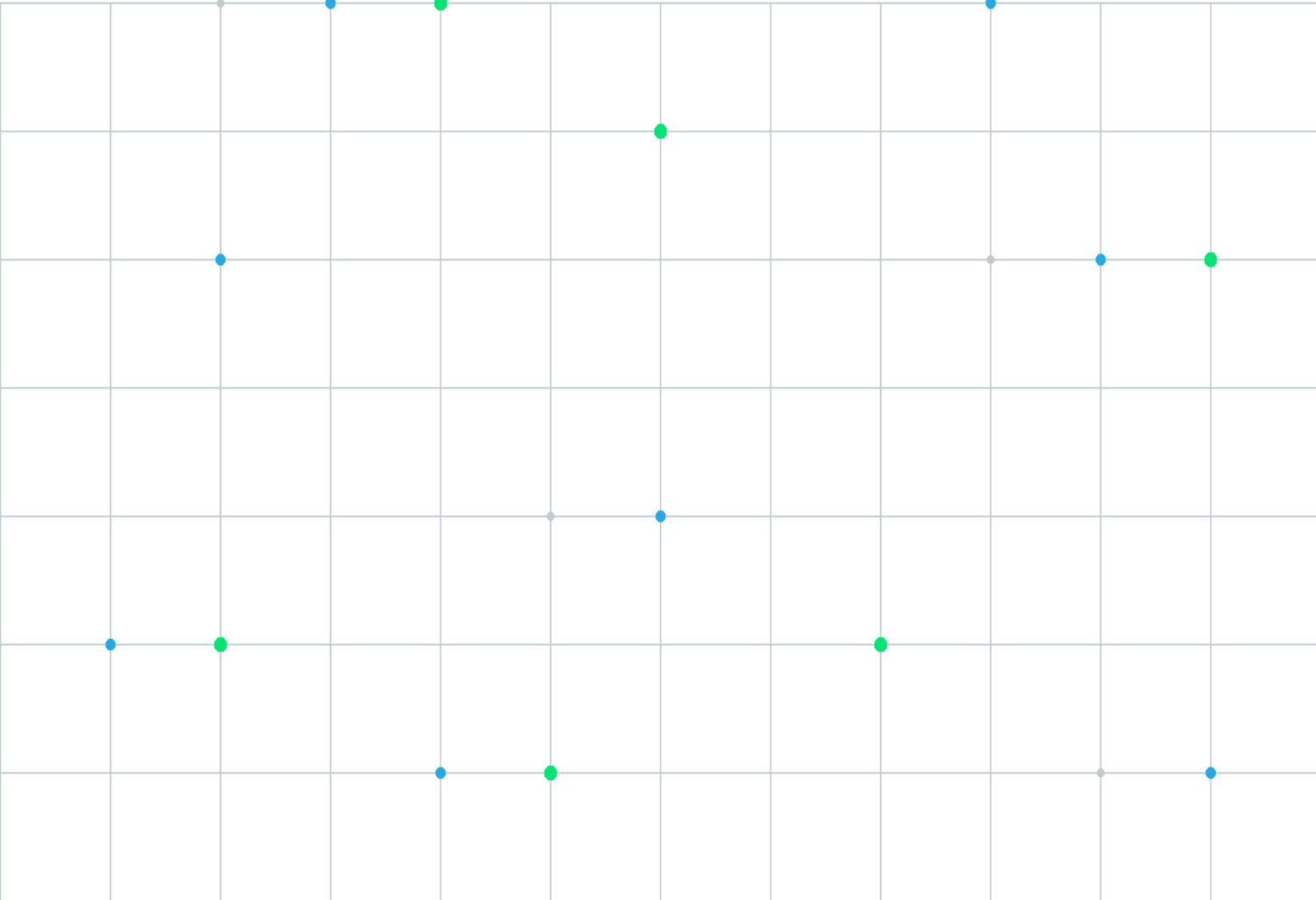


AutoCert+ Drop Copy 4.0 User Manual

22 Sep 2025



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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 to CME Globex, CME Group provides a dedicated certification environment to allow customers to test their systems before they complete certification.

The Drop Copy 4.0 service allows customers to receive real-time copies of CME Globex Execution Report and Acknowledgment messages as they are sent over iLink order entry system sessions. Drop Copy aggregates iLink messages, enabling customers to aggregate positions and monitor orders for sessions guaranteed by one or more clearing firms upon approval of the clearing firms. Customers must:

- manage sequence streams from Convenience Gateway (CGW) iLink source sessions across all market segments.
- manage sequence streams from Market Segment Gateway (MSGW) iLink source sessions per unique market segment; with the possibility of having the same sequence numbers from multiple market segments.

 **Note:** The message body of all Drop Copy application messages is identical to the standard iLink session.

 **Note:** This test suite uses "Dummy Contracts" or "Certification Dedicated Instruments" during the certification process.

 **Note:** Tests that are only for Convenience Gateway (CGW) or Market Segment Gateway (MSGW) connections are indicated in the topic titles of this Help system.

► **To run and navigate AutoCert+:**

1. [Log into](#) the automated certification tool.
2. Review general AutoCert+ test suite [navigation](#) and [general interview](#) information.
3. Complete the [Interview](#) for this test suite.
4. Complete applicable test cases.
5. Complete the certification process from the [Post Certification](#) tab.

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, select **Yes** or **No** to the question regarding whether or not your system supports Drop Copy functionality.

In addition, you must determine the types of instruments (Options or Futures) and the types of products (Interest Rate, Energy, Equity, FX, and/or Commodity) your system supports.

For the question, "Does your system support Futures or Options?" note the following:

- If you select both **Futures** and **Options**, then future dummy contracts are used for all test cases (futures override options).
- If you select **Futures** or both **Futures** and **Options**, all order types are available for selection.
- If you select only **Options**, then only Market Limit is available for the order type.

After answering the Interview questions, click the **Complete** button.



Note: The number of market segments and the instruments listed on each market segment is subject to change.



Note: For customers choosing to sequence messages from the MSGW source sessions:

- Each Drop Copy MSGW session has a unique IP address for each of the primary and backup MSGWs
- Each Drop Copy CGW session has one unique IP address for the primary and backup on the convenience gateway receiving messages from all market segments.

The screenshot shows the 'Interview' tab of the AutoCert+ application. The form contains the following sections:

- Which gateway access model will your system support?**
 - ☒ Convenience
 - ☐ Market Segment
- Does your system support Futures or Options?**
 - ☒ Futures
 - ☒ Options
- Which markets does your application support?**
 - ☒ Interest Rate
 - ☒ Energy
 - ☒ Equity
 - ☒ FX
 - ☐ Commodity
- Secure key pairs can expire mid-week. It is important to maintain sequence numbers when rotating keys during mid-week. Will your application support a mid-week key rotation?**
 - ☒ Yes
 - ☐ No (If No, ensure a proper process is in place to rotate keys ahead of expiration times that land mid-week)

At the bottom of the form is an orange **Complete** button.

What's New

The list below illustrates the updates made to the AutoCert+ Drop Copy 4.0 Help system.

Date	Topic	Description
22 Sep 2025	Beginning of week Logon	Changes to test sequence.
7 Oct 2022	Format	Website and PDF format changes only.
16 Mar 2022	Logon Process with Failover	Updated screenshot, description and step 1.
30 Apr 2019	Logon Process with Failover (CGW)	Updated main screenshot. Removed second sentence and screenshot under step 3.
28 Jan 2019	Receive Message Stream (MSGW)	Updated screenshot and steps.
05 Apr 2018	Mid-Week Key Rotation (CGW) Mid-Week Key Rotation (MSGW)	Added new topics.
16 Feb 2018	Receive Message Stream (CGW) Receive Message Stream (MSGW)	Updated tests with steps for trade correction and cancellation.
25 Aug 2015	Logon Process with Failover (CGW)	Added topic.
	Logon Process with Primary Target Session Enforcement	Removed topic.
07 May 2015	Logon Process with Primary Target Session Enforcement Receive Message Stream (CGW) Bi-Directional Resend Request Scenario	Updated steps.
02 Mar 2015	All	Initial release.

Session Management Tests

This section contains information on the session management tests.

Logon Message (CGW)

The purpose of this test is to verify that your system can appropriately handle timely connection at [logon](#), implement a valid logon [heartbeat](#) interval and then handle point of origin values on any Logon and ensuing acknowledgment message.

Interview
Test Suite
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Post Certification

Steps of the test: Dropcopy CGW Session Management Tests - Logon Message

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step1.

Purpose
The purpose of this test is to verify that client system can appropriately handle timely connection at Logon, implement valid logon heartbeat interval and enter handle point of origin values on any logon and ensuing acknowledgement message.

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.
START TEST

Description	Flag	Status
1 Over the Drop Copy client application, submit a Logon message		Not Tested
2 Receive and process a Logon Confirmation message		Not Tested
3 Receive and process a Test Request message		Not Tested
4 Submit a Heartbeat message		Not Tested
5 Submit a Logout message		Not Tested
6 Receive and process a Logout Confirmation message		Not Tested

Key: not tested complete pending failed

REFRESH

► To run a Logon Message (CGW) test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click the **START TEST** button.

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

3. Over a Drop Copy connection, submit a [Logon \(35=A\)](#) message.
4. Receive and process a [Logon \(35=A\)](#) message.
5. Receive and process a [Test Request \(35=1\)](#) message.
6. Submit a [Heartbeat \(35=0\)](#) message.
7. Submit a [Logout \(35=5\)](#) message.
8. Receive and process a Logout (35=5) message.

Logon Process with Failover

The purpose of this test is to verify that client system can support primary gateway enforcement. In the event of a Drop Copy 4.0 failover, upon logon to the new primary connection, client systems will experience a significant increase (currently set to

4000) in sequence numbers (tag 34-MsgSeqNum) sent from CME Globex to the Client System. CME Group recommends that client systems request all missing messages.

For all [Resend Requests](#), the client system can request no more than the maximum limit of 2500 messages. To recover any missed in-flight messages beyond the 2500 message range, the client system must submit multiple Resend Request (tag 35-MessageType=2) messages.

In response to the Resend Request from the client system, Drop Copy 4.0 will respond with a [Gap Fill](#) for all [Administrative](#) messages and send tag 35-MessageType35=n with tag 43-PossDupFlag=Y for business messages.

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

Steps of the test: Dropcopy CGW/MSGW Session Management Test - Logon Process with Failover

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

Purpose
The purpose of this test is to verify that client system can support primary gateway enforcement. In the event of a Drop Copy 4.0 failover, upon logon to the new primary connection, client systems will experience a significant increase (currently set to 4000) in sequence numbers (tag 34-MsgSeqNum) sent from CME Globex to the Client System. CME Group recommends that client systems request all missing messages. For all [Resend Requests](#), the client system can request no more than the maximum limit of 2500 messages. To recover any missed in-flight messages beyond the 2500 message range, the client system must submit multiple Resend Request (tag 35-MessageType=2) messages. In response to the Resend Request from the client system, Drop Copy 4.0 will respond with a [Gap Fill](#) for all [Administrative](#) messages and send tag 35-MessageType35=n with tag 43-PossDupFlag=Y for business messages.

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.

START TEST

Test Not Running

Description	Flag	Status
1 Submit a Logon message to the primary Drop Copy connection.		Not Tested
2 Over the Drop Copy client application, submit a Logon message on the backup gateway		Not Tested
3 Receive and process a Logon Confirmation message		Not Tested
4 Submit a Resend Request message(s)		Not Tested
5 Receive a Gap Fill message(s)		Not Tested
6 Submit a Heartbeat message		Not Tested
7 Receive and process a Heartbeat message		Not Tested
8 Submit a Heartbeat message		Not Tested
9 Submit a Logout message		Not Tested
10 Receive and process a Logout Confirmation message		Not Tested

Key: not tested complete pending failed

REFRESH

► To run a Logon Process with Failover (CGW) test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click the **START TEST** button.

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

3. Submit a [Logon \(35=A\)](#) message to the primary Drop Copy connection.
4. Over the Drop Copy client application, submit a Logon (35=A) message on the backup gateway.
5. Receive and process a [Logon \(35=A\)](#) message.
6. Submit a [Resend Request \(35=2\)](#) message(s).
7. Receive a [Gap Fill \(35=4,123-GapFillFlag=Y\)](#) message(s).
8. Submit a [Heartbeat \(35=0\)](#) message.
9. Receive and process a Heartbeat message.
10. Submit a Heartbeat message.
11. Submit a [Logout \(35=5\)](#) message.
12. Receive and process a [Logout \(35=5\)](#) message.

Logon with Market Segment ID (MSGW)

This test verifies that your client system can leverage tag 57-TargetSubID on any Logon message to specify the market segment (tag 1300-MarketSegmentID) from the [Market Data Security Definition \(35=d\)](#) message.

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Steps of the test: Dropcopy MSGW Session Management Tests - Logon Message

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step1.

Purpose
The purpose of this test is to verify that client system can leverage TargetSubID on any logon message to specify MarketSegment from the market data Security Definition.

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.
START TEST

Description	Flag	Status
1 Over the Drop Copy client application, submit a Logon message for market segment A		Not Tested
2 Receive and process a Logon Confirmation message from market segment A		Not Tested
3 Receive and process a Test Request message from market segment A		Not Tested
4 Submit a Heartbeat message for market segment A		Not Tested
5 Submit a Logout message for market segment A		Not Tested
6 Receive and process a Logout Confirmation message for market segment A		Not Tested

REFRESH

Key: not tested complete pending failed

► To run the Logon with Market Segment ID test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click the **START TEST** button.

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

3. Over a Drop Copy connection, submit a [Logon \(35=A\)](#) message for market segment A.
4. Receive and process a Logon (35=A) message for market segment A.
5. Receive and process a [Test Request \(35=1\)](#) message for market segment A.
6. Submit a [Heartbeat \(35=0\)](#) message for market segment A.
7. Submit a [Logout \(35=5\)](#) message for market segment A.
8. Receive and process a Logout (35=5) message for market segment A.

Beginning of Week Logon

This test verifies that your system can log on to the CME Group system at the beginning of the week and maintain the correct inbound and outbound sequence numbers (tag 34-MsgSeqNum).

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

Steps of the test: Dropcopy CGW/MSGW Session Management Test - Beginning of week Logon

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 Beginning of Week Logon test verifies that your system can logon to the CME Group system at the beginning of the week and maintain the correct inbound and outbound sequence numbers.

Please assign a Sendercomp ID and make sure a valid instrument is selected to start certifying a test.

Description	Flag	Status
1 Submit a Logon (35=A) message using the proper sequence number (tag 34-MsgSeqNum) for beginning of week logon		Not Tested
2 Receive and process a Logon Confirmation message		Not Tested
3 Receive and process a Test Request message		Not Tested
4 Submit a Heartbeat message		Not Tested

Key: not tested complete pending failed

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

► **To run the Beginning of Week Logon test:**

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click the **START TEST** button.

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

3. Submit a [Logon \(35=A\)](#) message using the proper sequence number (tag 34-MsgSeqNum) for beginning of week logon.
4. Receive and process a [Logon \(35=A\)](#) confirmation message.
5. Receive and process a Test Request message.
6. Submit a [Heartbeat \(35=0\)](#) message.

Mid Week Logon

This test verifies that your system can [connect](#) to the CME Group system during the week and maintain the correct inbound and outbound sequence numbers (tag 34-MsgSeqNum).

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Steps of the test: Dropcopy CGW/MSGW Session Management Test - Mid week Logon process

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 Logon Process Mid Week test verifies that your system can connect to the CME Group system during the week and maintain the correct inbound and outbound sequence numbers.

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.
START TEST

Description	Flag	Status
1 Over the Drop Copy client application, submit a Logon message		Not Tested
2 Receive and process a Logout Confirmation message		Not Tested
3 Submit a Logon message using the proper sequence number		Not Tested
4 Receive and process a Logon Confirmation message		Not Tested
5 Receive and process a Test Request message		Not Tested
6 Submit a Heartbeat message		Not Tested

REFRESH

Key: not tested complete pending failed

► **To run the Mid Week Logon test:**

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click the **START TEST** button.

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

3. Over a Drop Copy connection, submit a [Logon \(35=A\)](#) message.
4. Receive and process a [Logout \(35=5\)](#) message, including tag 789-NextMsgSeqNum.
5. Submit a Logon (35=A) message, including the correct sequence number (tag 34-MsgSeqNum)
6. Receive and process a [Logon \(35=A\)](#) message.
7. Receive and process a [Test Request \(35=1\)](#) message.
8. Submit a [Heartbeat \(35=0\)](#) message.

Mid-Week Key Rotation (CGW)

This test verifies that the client system can properly logon to the CME system using the security enhancement functionality with key rotation. You will need two valid keys to complete this test.

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

Steps of the test: Drop Copy CGW - Mid-Week Key Rotation

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

Purpose
The purpose of this test is to verify that the client system can properly login to the CME system using the security enhancement functionality with key rotation. You will need two valid keys to complete this test.

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.

START TEST

Description	Flag	Status
1 Over an iLink connection, submit a Logon message		Not Tested
2 Receive and process a Logon Confirmation message		Not Tested
3 Receive and process a Test Request message		Not Tested
4 Submit a Heartbeat message		Not Tested
5 Submit a Logout and process a Logout Confirmation		Not Tested
6 Submit a Logon message using a different set of secure key pairs other than the ones used in step 1		Not Tested
7 Receive and process a Logon Confirmation message		Not Tested
8 Receive and process a Test Request message		Not Tested
9 Submit a Heartbeat message		Not Tested

Key: ● not tested ● complete ● pending ● failed

REFRESH

► **To complete the Mid-Week Key Rotation (CGW) test:**

1. Select a Drop Copy CGW **SenderComp** from the drop-down and click **ASSIGN** if a SenderComp is not already assigned.

2. Click **Start Test** to begin.

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

3. Over an iLink connection, submit a [Logon \(35=A\)](#) message.

Note: Messages sent before the Logon Confirmation (35=A) message is sent will cause the test to fail.

4. Receive and process a [Logon Confirmation \(35=A\)](#) message.
5. Receive and process a [Test Request \(35=1\)](#) message.
6. Submit a [Heartbeat \(35=0\)](#) message.

Note: If Tag 112-TestReqID in the Heartbeat message is not identical to Tag 112-TestReqID in the Test Request message, the issue must be resolved and you must restart the test.

7. Submit a [Logout \(35=5\)](#) and process a [Logout Confirmation \(35=5\)](#).
8. Submit a Logon (35=A) message using a different set of secure key pairs other than the ones used in step 1.
9. Receive and process a Logon Confirmation (35=A) message.

Note: Client systems with Cancel on Disconnect (COD) or Mass Quote functionality enabled may send 1 [Resend Request \(35=2\)](#) message to have any missed messages resent.

10. Receive and process a Test Request (35=1) message.
11. Submit a Heartbeat message.

Mid-Week Key Rotation (MSGW)

This test verifies that the client system can properly logon to the CME system using the security enhancement functionality with key rotation. You will need two valid keys to complete this test.

Interview Test Suite **Test Case** Post Certification

Steps of the test: Drop Copy MSGW - Mid-Week Key Rotation

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

Purpose
The purpose of this test is to verify that the client system can properly logon to the CME system using the security enhancement functionality with key rotation. You will need two valid keys to complete this test.

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.

START TEST

Description	Flag	Status
1 Over an iLink connection, submit a Logon message to segment 99		Not Tested
2 Receive and process a Logon Confirmation message		Not Tested
3 Receive and process a Test Request message		Not Tested
4 Submit a Heartbeat message		Not Tested
5 Submit a Logout and process a Logout Confirmation		Not Tested
6 Submit a Logon message to segment 99 using a different set of secure key pairs other than the ones used in step 1		Not Tested
7 Receive and process a Logon Confirmation message		Not Tested
8 Receive and process a Test Request message		Not Tested
9 Submit a Heartbeat message		Not Tested

Key: ● not tested ● complete ● pending ● failed

REFRESH

► To complete the Mid-Week Key Rotation (MSGW) test:

1. Select a Drop Copy MSGW **SenderComp** from the drop-down and click **ASSIGN** if a SenderComp is not already assigned.

SenderComp :

Select SenderComp

Select SenderComp

FFM111-ILINK-MSGW
D51004-ILINK-CGW
U80004-ILINK-CGW
Q29111-ILINK-CGW
U31111-ILINK-CGW
O63001-ILINK-CGW
D53004-ILINK-CGW
U27111-ILINK-CGW
Y94111-ILINK-MSGW
309MSGW-DROP-COPY-MSGW
D90004-ILINK-CGW
K04123-ILINK-CGW
U39112-ILINK-CGW
Q3ACPN-DROP-COPY-CGW
U26111-ILINK-CGW
KH2112-ILINK-MSGW
JUN004-ILINK-MSGW
U28111-ILINK-CGW
ED2004-ILINK-MSGW

ASSIGN

Interview Test Suite Post Certification

iLink CGW - Logon
iLink MSGW - Logon
iLink CGW - Mid-Week Key Rotation
iLink MSGW - Mid-Week Key Rotation


2. Click **Start Test** to begin.

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


3. Over an iLink connection, submit a [Logon \(35=A\)](#) message with security enhancement to segment 99.

 **Note:** Messages sent before the Logon Confirmation (35=A) message is sent will cause the test to fail.

4. Receive and process a [Logon Confirmation \(35=A\)](#) message.
5. Receive and process a [Test Request \(35=1\)](#) message.
6. Submit a [Heartbeat \(35=0\)](#) message.

 **Note:** If Tag 112-TestReqID in the Heartbeat message is not identical to Tag 112-TestReqID in the Test Request message, the issue must be resolved and you must restart the test.

7. Submit a [Logout \(35=5\)](#) and process a [Logout Confirmation \(35=5\)](#).
8. Submit a Logon (35=A) message to segment 99 using a different set of secure key pairs other than the ones used in step 1.
9. Receive and process a Logon Confirmation (35=A) message.

 **Note:** Client systems with Cancel on Disconnect (COD) or Mass Quote functionality enabled may send 1 [Resend Request \(35=2\)](#) message to have any missed messages resent.

10. Receive and process a Test Request (35=1) message.
11. Submit a Heartbeat message.

Receive Message Stream Tests

This section contains information on the tests for receiving message streams.

Receive Message Stream (CGW)

This test verifies that your system can receive and unpack [encapsulated XML non-FIX \(35=n\)](#) messages over a Drop Copy CGW connection.

Steps of the test: Dropcopy CGW Sequencing Test - Receive Message Stream (No Resend)

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 the test is to verify your system can receive and process encapsulated messages.

Selected Contract : 1GLBU8,1GLBV8,1GLBU8-1GLBV8 - 645 **Unlock**

Category	IP	Port
Incremental Feed A	224.0.28.126	11646
Incremental Feed B	224.0.25.101	11746
Snapshot MBP	224.0.25.127	19646
Snapshot MBO	224.0.25.254	20646
Instrument Replay	224.0.28.126	16646

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. **START TEST**

Description	Flag	Status
1 Receive and verify encapsulated new order execution report		Not Tested
2 Receive and verify encapsulated partial fill execution report		Not Tested
3 Receive and verify encapsulated trade correction execution report		Not Tested
4 Receive and Process encapsulated trade cancellation execution report		Not Tested

Key: not tested complete pending failed

REFRESH

► To run the Receive Message Stream (CGW) test:

- From the **Contract** drop-down, select the desired contract if the contract is not already locked.
- Click the **START TEST** button.

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

- Verify that your system received the [encapsulated \(35=n\)](#) message with an [Execution Report - Order Creation](#).

Enter the following tag values:

- tag 44-Price
- tag 38-OrderQty

1	Receive and verify encapsulated new order execution report Instrument: 1GLBU8 SecurityID: 998291 Price : <input type="text"/> OrderQty : <input type="text"/> Submit		Pending
---	---	--	---------


- Verify that your system received the encapsulated (35=n) message with an [Execution Report - Partial Fill](#).

Enter the following tag values:

- tag 44-Price
- tag 151-LeavesQty

2	Receive and verify encapsulated partial fill execution report			Pending
	Price : <input type="text"/>			
	LeavesQty : <input type="text"/>			
	<input type="button" value="Submit"/>			

5. Enter the tag 31-LastPx value to verify that your system received the encapsulated (35=n) message with an [Execution Report - Trade Correction](#).

3	Receive and verify encapsulated trade correction execution report			Pending
	LastPx : <input type="text"/>			
	<input type="button" value="Submit"/>			

6. Select **Yes** or **No** to indicate whether or not your system processed the encapsulated (35=n) message with an [Execution Report - Trade Cancellation](#).

Example of Encapsulated Message: (Multiple Messages)

The FIX payload is shown in **bold** below.

```
8=FIX.4.2|9=377|35=n|34=9152031|49=CMEGROUP|52=20130515-08:56:24.791|56=AT13301|212=300|
213=<RTRF>8=FIX.4.2|9=264|35=G|34=4574256|369=4574258|49=5CS852N|50=852|
52=20130515-06:00:04.128|56=CME|57=G|142=US,IL|1=TEST_TORNADO|11=5CSq4g1k8|21=1|37=991525447|
38=99|40=2|41=5CSq4ft04|44=80|54=1|55=OK|60=20130515-06:00:04.128|107=KRWM3 P0945|
167=OPT|204=0|1028=N|9702=4|9717=5CSq4fkec|10=151|</RTRF>|10=031|
```

Receive Message Stream (MSGW)

The purpose of this test is to verify that your system can receive and process Execution Reports with a non-unique SessionID and similar message sequence numbers (i.e., same SessionID and MsgSeqNum for 2 different market segments).

Note: For this test, the source session sequence numbers will be reset to 1. Systems are expected to be logged in to both market segments concurrently to gather Execution Reports.

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Steps of the test: Dropcopy MSGW Sequencing Test - Receive Message Stream (No Resend)

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

Purpose

The purpose of this test is to verify that the client system can receive and process execution reports with non-unique SessionID and similar message sequence numbers (i.e. same SessionID and MsgSeqNum for 2 different market segments). Please note for this test the source session sequence numbers will be reset to one. Systems are expected to be logged in to both Market Segments concurrently to gather execution reports

Selected Contract : 1HEG0.1ZWN0 -941 **Unlock**

Category	IP	Port
Incremental Feed A for Segment 99	233.158.8.126	17941
Incremental Feed B for Segment 99	224.0.25.39	18941
Snapshot MBP for Segment 99	233.158.8.126	19941
Snapshot MBO for Segment 99	224.0.25.61	21941
Instrument Replay for Segment 99	233.158.8.126	16941
Incremental Feed A for Segment 70	233.158.8.126	17965
Incremental Feed B for Segment 70	233.158.8.126	18965
Snapshot MBP for Segment 70	233.158.8.126	19965
Snapshot MBO for Segment 70	224.0.25.5	21965
Instrument Replay for Segment 70	233.158.8.126	16965

Category	Link
Templates File:	templates_FixBinary.xml
Configuration File:	config.xml

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. **START TEST**

Description	Flag	Status
1 Sequence numbers have been reset to simulate the beginning of the week. Successfully login to segment 99. Also login to either segment 70 (If futures contracts are selected) OR segment 60 (for options contracts).		Not Tested
2 Receive encapsulated message from market segment 99		Not Tested
3 Receive an encapsulated message from market segment 70 (for futures contracts) OR market segment 60 (for options contracts)		Not Tested
4 Receive an encapsulated trade correction execution report from the same market segment as step 3		Not Tested
5 Receive an encapsulated trade cancellation execution report from the same market segment as steps 3 and 4		Not Tested
6 Receive encapsulated message from market segment 99		Not Tested
7 Receive encapsulated trade correction execution report from market segment 99		Not Tested
8 Receive encapsulated trade cancellation execution report from market segment 99		Not Tested
9 Confirm your system successfully processed all segment messages with concurrent connections		Not Tested

Key: ● not tested ● complete ● pending ● failed

REFRESH

▶ To run the Receive Message Stream (MSGW) test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click the **START TEST** button.

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

3. Log in to market segment 99. Also log in to market segment 70 (for futures contracts) OR segment 60 (for options contracts).
4. Receive an [encapsulated \(35=n\)](#) message from market segment 99.
5. Receive an encapsulated message from market Segment 70 (for futures contracts) OR market segment 60 (for options contracts).
6. Receive an encapsulated [Execution Report - Trade Correction](#) from the same market segment as step 3.
7. Receive an encapsulated [Execution Report - Trade Cancellation](#) from the same market segment as steps 3 and 4.

8. Receive an encapsulated (35=n) message from market segment 99.
9. Receive an encapsulated Execution Report - Trade Correction from market segment 99.
10. Receive an encapsulated Execution Report - Trade Cancellation from market segment 99.
11. Confirm that your system successfully processed all segment messages with concurrent connections

Example of Encapsulated Message: (Multiple Messages)

The FIX payload is shown in **bold** below.

```
8=FIX.4.2|9=377|35=n|34=9152031|49=CMEGROUP|52=20130515-08:56:24.791|56=AT13301|212=300|
213=<RTRF>8=FIX.4.2|9=264|35=G|34=4574256|369=4574258|49=5CS852N|50=852|
52=20130515-06:00:04.128|56=CME|57=G|142=US,IL|1=TEST_TORNADO|11=5CSq4g1k8|21=1|37=991525447|
38=99|40=2|41=5CSq4ft04|44=80|54=1|55=OK|60=20130515-06:00:04.128|107=KRWM3 P0945|
167=OPT|204=0|1028=N|9702=4|9717=5CSq4fkec|10=151|</RTRF>|10=031|
```

Sequencing Tests

This section contains information on the sequencing tests.

Respond to Resend Request

This test verifies that your system can respond to a [Resend Request](#) by gap fill.

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Steps of the test: Dropcopy CGW/MSGW Sequencing Tests - Respond to Resend Request

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

Purpose
The purpose of this test is to verify that the client system can respond to a Resend Request by gap fill.

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.
START TEST

Description	Flag	Status
1 Over a drop copy connection, submit a Heartbeat		Not Tested
2 Receive and process a Resend Request message		Not Tested
3 Submit Sequence Reset & Gap Fill message		Not Tested
4 Submit a Heartbeat message		Not Tested
5 Receive and process a Heartbeat message		Not Tested
6 Submit a Heartbeat message		Not Tested

REFRESH

Keys: not tested complete pending failed

► To run the Respond to Resend Request test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click the **START TEST** button.

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

3. Over a Drop Copy connection, submit a [Heartbeat \(35=0\)](#) message.
4. Receive and process a [Resend Request \(35=2\)](#) message.
5. Submit a [Sequence Reset - Gap Fill \(35=2, 123-GapFillFlag=Y\)](#) message.
6. Submit a Heartbeat (35=0) message.
7. Receive and process a Heartbeat (35=0) message.
8. Submit a Heartbeat (35=0) message.

Bi-Directional Resend Request Scenario

This test verifies that your system can receive out-of-sequence messages across multiple session connections during a Resend Response without triggering another [Resend Request](#).

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Steps of the test: Dropcopy CGW/MSGW Sequencing Tests - Bi-Directional Resend Request Scenario

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

Purpose
The purpose of this test is to verify that the client system can receive out-of-sequence messages across multiple session connections during a Resend Response without triggering another Resend Request.

Description	Flag	Status
1 Over a drop copy connection, submit a Heartbeat		Complete
2 Receive and process a Heartbeat message		Complete
3 Over a drop copy connection, submit a Heartbeat		Complete
4 Receive and process an Execution Report - Confirmation/Acknowledgement messages and detect a sequence gap		Complete
5 Submit a Resend Request message		Complete
6 Receive and process an Execution Report - Confirmation/Acknowledgement messages		Complete
7 Receive and process a Resend Request message		Complete
8 Submit a Sequence Reset - Gap fill message		Complete
9 Submit a Heartbeat message		Complete
10 Receive and process a Heartbeat message		Complete
11 Submit a Heartbeat message		Complete

Key: not tested complete pending failed

REFRESH

► **To run the Bi-Directional Resend Request Scenario test:**

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click the **START TEST** button.

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

3. Over a Drop Copy connection, submit a [Heartbeat \(35=0\)](#) message.
4. Receive and process a Heartbeat (35=0) message.
5. Over a Drop Copy connection, submit a Heartbeat (35=0) message.
6. Receive and process an [Execution Report - Order Creation \[35=8, 39-OrdStatus=0 \(New Order Ack\)\]](#) message and detect a sequence gap.
7. Submit a [Resend Request \(35=2\)](#) message.

Note: Use enhanced resend logic, **NOT** basic resend logic.

Note: Send only one Resend Request (35=2) message.

8. Receive and process an Execution Report - Order Creation [35=8, 39-OrdStatus=0 (New Order Ack)] message.
9. Receive and process a Resend Request (35=2) message.
10. Submit a [Sequence Reset - Gap Fill \(35=4, 123-GapFillFlag=Y\)](#) message.

11. Submit a Heartbeat (35=0) message.
12. Receive and process a Heartbeat (35=0) message.
13. Submit a Heartbeat (35=0) message.

Process Real-Time Messages During a Resend Response

This test verifies that your system can receive out-of-sequence messages during a [Resend Response](#) without triggering another Resend Request.

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Steps of the test: Dropcopy CGW/MSGW Sequencing Tests - Process real-time messages during a Resend Response from CME Globex

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 receive out-of-sequence messages during a Resend Response without triggering another Resend Request.

Selected Contract : 0ESZ4,0ESH5,0ESZ4-0ESH5 - 625 **Unlock**

Category	IP	Port
Incremental Feed A	224.0.25.101	11625
Incremental Feed B	224.0.25.101	11725
Snapshot	224.0.25.127	19625
Instrument Replay	224.0.25.127	16625

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.
START TEST

Description	Flag	Status
1 Submit a Heartbeat message		Not Tested
2 Receive and process an heartbeat message and detect sequence gap		Not Tested
3 Submit a Resend Request message		Not Tested
4 Receive real-time interleaved messages with resend responses and process an Execution Report - Confirmation/Acknowledgement		Not Tested
5 Submit a Heartbeat message		Not Tested
6 Receive and process a Heartbeat message		Not Tested
7 Submit a Heartbeat message		Not Tested

REFRESH

Key: not tested complete pending failed

► To run the Process Real-Time Messages During a Resend Response test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click the **START TEST** button.

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

3. Over a Drop Copy connection, submit a [Heartbeat \(35=0\)](#) message.
4. Receive and process a Heartbeat (35=0) message and detect a sequence gap..
5. Submit a [Resend Request \(35=2\)](#) message.

6. Receive real-time interleaved messages with resend responses and process an [Execution Report - Order Creation \[35=8, 39-OrdStatus=0 \(New Order Ack\)\]](#) message.
7. Submit a Heartbeat (35=0) message.
8. Receive and process a Heartbeat (35=0) message.
9. Submit a Heartbeat (35=0) message.

Process Sequence Streams Based on Session and Market Segment (MSGW)

This test verifies that your system can receive and process Execution Reports with a non-unique SessionID and the same message sequence numbers (i.e., same SessionID and MsgSeqNum for 2 different market segments).

Note: The source session sequence numbers will be reset to 1.

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Steps of the test: Dropcopy MSGW Sequencing Test - Process sequence streams based on session and market segment.

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

Purpose
The purpose of this test is to verify that the client system can receive and process execution reports with non-unique SessionID and similar message sequence numbers (i.e. same SessionID and MsgSeqNum for 3 2 different market segments). Please note for this test the source session sequence numbers will be reset to one.

Selected Contract: 3CLM5,3CLU5,3CLM5-3CLU5 - 643 **Unlock**
Selected Second Contract: 1BBZ4,1BBH5,1BBZ4-1BBH5 - 643 **Unlock**

Category	IP	Port
Incremental Feed A	224.0.25.101	11643
Incremental Feed B	224.0.25.101	11743
Snapshot	224.0.25.127	19643
Instrument Replay	224.0.25.127	16643

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.

START TEST

Description	Flag	Status
1 Receive and process an Execution Report - Confirmation/Acknowledgement message from market segment A		Not Tested
2 Receive and process an Execution Report - Confirmation/Acknowledgement message from market segment B		Not Tested

Keys: not tested complete pending failed

REFRESH

► To run the Process Sequence Streams Based on Session and Market Segment (MSGW) test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click the **START TEST** button.

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

3. Receive and process an [Execution Report - Order Creation \[35=8, 39-OrdStatus=0 \(New Order Ack\)\]](#) message from market segment A.

4. Receive and process an Execution Report - Order Creation [35=8, 39-OrdStatus=0 (New Order Ack)] message from market segment B.

Receive Encapsulated Message from Simulated Order Mass Action Messages

This test verifies that your system can successfully receive an [Order Mass Action Report \[35=BZ, 1375-MassActionResponse=1 \(Accepted\)\]](#) message.

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Steps of the test: Drop Copy Simulated Order Mass Action Messages

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step 1.

Purpose
The Purpose of this test is to verify that customer application can successfully receive Order Mass Action Report(35=BZ) from Mass Order Cancel by MarketSegmentID

Selected Contract: 26AZ3,26AU3,26AZ3-26AU3 - 703
Unlock

Category	IP	Port
Incremental Feed A	IFA_ID_1	23
Incremental Feed B	IFB_ID_1	25
Snapshot	SPT_ID_1	37
Instrument Replay	IRP_ID_1	29

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.

START TEST

Description	Flag	Status
1 Receive and process a simulated Order Mass Action Report Accepted		Not Tested
2 Receive and process a simulated Order Mass Action Report Accepted (no orders cancelled)		Not Tested

Key: not tested complete pending failed

REFRESH

► To run a Receive Encapsulated Message from Simulated Order Mass Action Messages test:

- From the **Contract** drop-down, select the desired contract if the contract is not already locked.
- Click the **START TEST** button.

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

- Enter the following tag values to verify that your system received the Order Mass Action Report (Accepted) message:
 - tag 1300-MarketSegmentID
 - tag 1374-MassActionScope
 - tag 1375-MassActionResponse
 - tag 533-TotalAffectedOrders
 - tag 534-NoAffectedOrders
 - tag 41-OrigClOrdID
 - tag 84-CxlQty

- tag 535-AffectedOrderID
 - tag 893-LastFragment
4. Enter the following tag values to verify that your system received the Order Mass Action Report (Accepted, no orders cancelled) message:
- tag 1300-MarketSegmentID
 - tag 1374-MassActionScope
 - tag 1375-MassActionResponse
 - tag 533-TotalAffectedOrders
 - tag 893-LastFragment