
User Guide

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MIT502 EuroTLX – Millennium Exchange

Guide to EuroTLX application Certification

1.4 September 2018



London
Stock Exchange Group

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Disclaimer

The London Stock Exchange Group has taken reasonable efforts to ensure that the information contained in this publication is correct at the time of going to press, but shall not be liable for decisions made in reliance on it. The London Stock Exchange Group will endeavour to provide notice to customers of changes being made to this document, but this notice cannot always be guaranteed. Therefore, please note that this publication may be updated at any time. The information contained is therefore for guidance only.

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1.0 Introduction

1.1 Purpose

The purpose of this document is to provide customers with a detailed overview of the Certification service.

1.2 Readership

This document is particularly relevant to software developers, system testers and anyone else involved in developing a software application for use on any of the Live Services.

This document should be read in conjunction with EuroTLX Millennium Technical Specifications and the product specific 'Guide to Testing Services' documents. Together, these documents provide all of the relevant information that customers require to develop and certify to the services.

1.3 Document Series

This document is part of a series of Customer Testing documents that are available to customers. The other documents are:

MIT501 - EUROTIX- Guide to Testing Services
MIT503 - EUROTIX - Full Certification Test Report

1.4 Document History

This document has been through the following iterations:

Issue	Date	Description
1.0	March 2014	First release of this document published via the Exchange's website
1.1	March 2016	Certification procedure and contacts
1.2	July 2016	Document updated for Release 9 and published via the Exchange's website
1.3	August 2017	Document updated, section 2.3, 2.4, 2.7, 5.3, 5.4 and 5.6 due to MIFID II go-live
1.4	September 2018	Document updated for 9.3 release. Section: 5.12 and 5.13

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1.5 Contacts

Please contact Market access Italy team if you have any functional questions about conformance procedures

- Phone Number: **+39 02 72426668**
- Email: market-access@borsaitaliana.it

2.0 Certification Programme

The Certification Programme is based on regulatory compliance supporting interoperability against the three eligible London Stock Exchange Group (LSEG) venues.

The following Certification Programme applies to anyone connecting a software application to an LSEG Live Service. A Live service is any production Trading or Information Services environment across LSEG.

Under EU and national regulatory requirements (including the ESMA Guidelines on Systems and Controls in a Highly Automated Trading Environment) the eligible LSEG venues are required to have procedures and arrangements to ensure fair and orderly trading. This includes requirements for physical and electronic security to protect systems from misuse or unauthorised access and to ensure the integrity of the data that is part of or passes through the systems. The eligible venues are required to undertake standardised certification testing to ensure that members and participants systems used to access the venues have a minimum level of functionality that is compatible with fair and orderly trading on those venues.

Customer non-compliance with this certification programme may constitute a breach of the eligible venue terms and conditions or rules.

2.1 Access to the Live Service

Access to the LSEG Live Services is permitted only when a customer's software application has been certified as being fit for purpose.

2.2 Software Identification

All customer software must be identifiable by a software name and version number. Software applications that do not have both a name and version number will not be certified. Certification is limited to a single version of the named software.

2.3 Mandatory Certification Requirements

Customer confirms that the certified application is fully conformant to all aspects of the GTP and MITCH Technical Specifications and technically behaves as described in the MITCH – MIT301 and

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MIT303 and GTP002 documents. Customer also confirms that its application correctly receives and manages all the market data messages the customer is interested in receiving and managing.

Customer confirms that the certified trading application is fully conformant to all aspects of the Technical Specifications. Customer also confirms that its application has in place the following controls:

- limits on transaction per second sent by Trading sessions (Comp IDs)
- limits on order quantity and order countervalue
- order and trade price limits against static and dynamic controls prices

2.4 Certification Policy

Customers are required to certify or re-certify their applications under the following conditions:

- Prior to use the application in the live environment (for new applications);
- The customer modifies the software in any way that directly impacts LSEG interfaces. This includes but is not limited to updates to Gateways, Order Management, Execution Management and Quote Management Software;
- The Exchange upgrades its production environment to a later version of software;
- The customer is requested to re-certify their application by the relevant venue

If no certifications have been performed during a solar year (because any of the previous conditions occurred), the customer will be asked to self-certify (by sending an email to the relevant Trading Venue team that look after certifications) that no changes have been applied to the application since the last certification.

2.5 Test Scenario Exception Policy

Customers only need to complete the test cases relating to the functionality that they will use on the Live Services. If a customer's application does not support the functionality described in a particular test scenario and they do not intend to complete the scenario during the test, this must be agreed.

2.6 Non-Conformant Behaviour on the Live Service

Any non-conformant behaviour by a customer's software application on the Live Services may lead to the software application being disconnected and not re-connected until it has been re-certified and the non-conformant behaviour corrected.

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2.7 Self Certification Email

If no certifications have been performed during a solar year (because any of the conditions reported in §2.4 occurred), the customer will be asked to self-certify (by sending an email) that no changes have been applied to the application since the last certification.

Email confirmation should be sent to Market-access@borsaitaliana.it

3.0 Certification Process

The Certification Process is an integral part of the Certification Programme

Mandatory testing will be required for all applications that wish to connect to the production environment and mandatory functions will need to be tested in order to confirm conformant behaviour.

Customers should consider their software application's 'production ready' before attempting the test. Customers should also read and familiarise themselves with this document and the Market and Product Specific Testing documents. These documents contain important guidance that must be read before completing the certification process. When ready to take the test, customers should complete the following steps:

- Customers should contact Market Access Italy to provide the software name and version
- The Market Access team will then confirm whether a Full Certification Test or a Self Certification email is required and forward the relevant Certification Test Report to the customer.

3.1 Full Certification Test

Before Taking the Test

The Market Access team for Milan markets will be available to assist participants in completing part of their certification test by performing both mandatory and optional functions.

Customers must identify the venue and the test scenarios supported by their application, by ticking the relevant boxes on the Certification Test Report

The report form must then be sent to:

- Market-access@borsaitaliana.it .

This is a formal record of the software application that is being certified.

Customers should save a copy of the test report as they will be required to use it during the test to record their test results.

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During the Test

Customers should complete the full set of uncoordinated test cycles described in Section 5 and inform the Market access Italy Team when this has been completed. If required Borsa Italiana can provide some limited support during this phase.

Customers should record the test results on MIT503 – EurtoTLX-Full Certification Test Report using the test procedure shown at the start of section 5. Customers are required to complete all test scenarios previously marked on the Full Certification Test Report. If a customer does not complete a pre-agreed test scenario, the test will fail.

When all of the uncoordinated test scenarios have been completed, the customer must then complete a set of coordinated test scenarios, assisted by a tester.

The customer can repeat this part as many times as necessary, however additional test sessions may have to be booked if the testing exceeds two hours.

When all test scenarios have been completed, the customer should email the completed Full Certification Test Report to the tester. The email should be addressed Market-access@borsaitaliana.it.

After the Test

After the test the tester will check the details on the completed Full Certification Test Report and review the log files for the completed test scenarios. A report is generated detailing how the customer's application has performed during the test. If no re-testing is required, the report will be sent to the customer to sign off the application as fit for purpose and ready for access to the Live Services

The following items are checked:

- The functional behaviour and message sequencing in each scenario
- If the session was maintained for the entire period or if it dropped
- If any errors were produced over the time period

If multiple interfaces were included in the test, the results are concatenated into a single report.

The report will be run specifying a time ranged limited to a single day.

If the customer is required to repeat any of the testing they should do so within 24 hours of the original test.

3.2 Self Certification Email

Customers who have not made any changes to their software may send an email confirming that their software has not changed since the last full certification. The software name and version must be the

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same as that listed on the last full certification test. Only one test in the year period may be a self certification email.

Email confirmation should be sent to Market-access@borsaitaliana.it.

By returning the signed copy of the Certification Test Report Certification Checklist, the customer is confirming that their application is fully conformant to all aspects of the Millennium Technical Specifications and technically behaves as described in the guidance given in both this document and the guide to testing.

4.0 Required and Mandatory Test Guidance

4.1 Required functionalities for trading applications

All Trading customers are required to develop and certify all the functionalities according to their profile in Production environment. Specifically, software applications dedicated to Broker activities (CompIDs TX*) should be certified for Continuous Trading/Order Management test cases. Software applications for Liquidity Providers should be certified for all trading test cases accordingly to their supported functionalities. Software applications supporting RFQ functionality have to certify the RFQ test according to the supported functionality (submit/response). An indication on whether the test is Required is reported in the document MIT503 - Full Certification Test Report.

4.2 Mandatory functionalities and Certification Passport for EuroTLX

All customers application which have successfully passed the conformance test for Borsa Italiana Markets, could obtain the Passport for Euro-TLX under the following conditions:

- The software certification period has not been expired (Annual Certification Policy LSEG)
- The software code has not been changed from Borsa Italiana certified version
- The customer is requested to perform on TLX CDS the test cases TLX-005, TLX-09d, TLX-015b, TLX-15c,
- The customer is required to fill "Yes" (Y) in the column "Completed on Borsa Italiana Markets" in Mit503 report for the all supported functionalities already certified on Borsa Italiana Markets.

4.3 Mandatory Own Trade Book Downloads

All Trading customers on the London Stock Exchange are required to develop and certify that their application can use the Own Trade Book Download service on the Post Trade Gateway. This is mandatory for all trading applications. This functionality enables firms to be able to recover in the event of a site failure at the London Stock Exchange or Customer Site without the need to request trade details from the Exchange.

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Note: This is only mandatory for trading participants of the London Stock Exchange. This functionality is optional for participants of Turquoise, Borsa Italiana and Euro-TLX markets.

4.4 Mandatory Replay and Recovery for All Market Data Interfaces

The use of both the Replay and Recovery channels is mandatory for all customers on all Market Data Gateways. Customers are required to confirm that their software applications can use both of these services. A Market Data Failover and Recovery Service is available on the Customer Development Service.

The level of the request (segment, channel or instrument) or the type of request (snapshot for order books, statistics or other) is not mandated but should mirror how the application will work in the production environment.

Note: Request limits are applied to both the Replay and Recovery services, limiting the number of recovery actions a customer can perform in a day.

5.0 Certification Test Scenarios

5.1 Test Procedure

Before proceeding with the certification test, customers must identify which scenarios are applicable and mark these on the Test Report.

Customers must perform all of the steps in each of the test scenarios and record the results in the relevant sections of the Test Report.

When documenting the test results, customers should include all information as requested in each of the steps, such as Order IDs, QuoteMsg IDs and Security IDs.

If the result does not match the expected result, the customer should still record it in the relevant section of the certification test report and in the comments section including the following:

- Order IDs/ QuoteMsg IDs (if any)
- Security ID
- Time of the order/quote/operation submission/execution
- Any information which may be helpful in troubleshooting the error

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Unless a log off or disconnect request is specified in the test case the customer should complete all test cases without logging off or disconnecting. If there are any unexpected log offs or disconnects, these should be documented in the comments section of the certification test report.

Note

According to official documentation participants have to ensure that each transaction sent to the platform contains an identifier that is unique for a trading day for each User (i.e. CompID for FIX). Please refer to test case TLX-005 in order to autocertify the required behaviour of application to be certified.

All test scenarios marked as mandatory must be completed unless an exception has been granted by the Technical Account Manager

Gateway connections and User IDs should be checked at least 2 working days before planned execution date

5.2 Level-2 ITCH

5.2.1 ITCH Replay Request

Type: ITCH Replay		ID #: TLX-001
Description: Logon and send <u>Replay Request</u> to request the retransmission of a small range of messages already published on the multicast channel.		
Comments: The Replay Request must be sent within 5 seconds of establishing a connection. The retransmission request will be sent from the server's cache of the last 65,000 messages published on the multicast channel		
Prerequisites		
#	Test Steps	Expected Results
1.	Establish a connection and Logon to the Replay Service <i>(please choose any one channel to connect to and provide details in the comments section of the Certification report.)</i>	Successful Logon.
2.	Send a Replay Request message <i>Provide the "market data group", "First Message" and</i>	Receive a successful Replay Response to the request.

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	<i>"count" field details in the Certification report.</i>	Receive requested messages.
3.	Logout and Disconnect with in 5 seconds of the transmission of the last missed message.	Logout message sent by client and connection terminated. If this is not done within 5 seconds, the server will terminate the client session.

5.2.2 ITCH Snapshot for Instrument

Type: ITCH Recovery		ID #: TLX-002
Description: Logon and request a Snapshot of the current order book for a particular instrument.		
Comments: If there is no activity for 5 seconds the server will send a Logout message and disconnect the client connection.		
Prerequisites		
#	Test Steps	Expected Results
1.	Establish a connection and send a Login Request to the Recovery Service <i>(please choose any one channel to connect to and provide details in the comments section of the Certification report.)</i>	Successful Login Response.
2.	Send a <u>Snapshot Request</u> for the current order book for an instrument.	Receive: A <u>Snapshot Response</u> to indicate whether a

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	<p><i>Provide the “sequence number” and “instrument ID” field details in the Certification Report.</i></p>	<p>Snapshot Request for an Instrument is accepted.</p> <p>A Snapshot of the current book for both the order and quote books (if any) for the requested instrument via a series of <u>Add Order</u> and <u>Add Attributed Order</u> messages (one book at a time).</p> <p>A <u>Snapshot Complete</u> message once the details for all active orders for the instrument’s order book are disseminated (one message for the order book and one for the quote book (if applicable).)</p>
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5.2.3 ITCH Snapshot for Segment

Type: ITCH Recovery		ID #: TLX-003	
Description: Request a snapshot of the current order book for all instruments in a specified segment.			
Comments: If there is no activity for 5 seconds or the client does not terminate the connection within 5 seconds of the transmission of the last application message, the server will send a <u>Logout</u> message.			
Prerequisites: Already logged on from previous Test Case			
#	Test Steps	Expected Results	
1.	<p>Send a <u>Snapshot Request</u> for the current order book for a segment.</p> <p><i>Provide the “segment” and “instrument ID” field details in the Certification report.</i></p>	<p>Receive:</p> <p>A <u>Snapshot Response</u> to indicate whether a Snapshot Request for a segment is accepted.</p> <p>A Snapshot of the current book for both the order and quote books (if any) for all instruments in the requested segment via series of <u>Add Order</u> and <u>Add Attributed Order</u> messages. (one instrument at a time)</p> <p>A <u>Snapshot Complete</u> message:</p> <p>Once the details of all active orders for a particular</p>	

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		instrument's order book are disseminated. A Snapshot Complete message once the details of all active orders for all instruments in the requested segment are disseminated.
2.	Logout and Disconnect with in 5 seconds of the transmission of the last missed message.	Logout message sent by client and connection terminated. If this is not done within 5 seconds, the server will terminate the client session.

5.3 Order Management

5.3.1 Establish Logon for Test Cycle

Type: FIX/Native Gateways	ID #: TLX-004	
Description: Establish a connection and Logon.		
Comments:		
Prerequisites: None.		
#	Test Steps	Expected Results
1.	Establish a connection and Logon.	Successful Logon. <i>This session must remain logged on for the duration of the certification test unless LSEG has instructed the customer to logout.</i>

5.3.2 Unique transaction identifier

Type: FIX/Native Gateways	ID #: TLX-005
Description: ISV/Customer should certificate that their implementation will “automatically” generate the ClOrdID/QuoteMsgId/Client Order Id for each transaction placed on the platform.	

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Comments: For performance reasons MIT Exchange will not carry out any real-time duplicate detection based on ClOrdID/QuoteMsgId/Client Order Id.

Prerequisites: Participants have to ensure that each transaction sent to the platform contains an identifier that is unique for a trading day for each User (i.e. CompID for FIX)

#	Test Steps	Expected Results
1.	Enter a Limit order <i>(Assuming there are matching orders for this order in the order book. If there are no matching orders in the order book, please create them.)</i> <i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i>	The order goes on to the order book and rests (if not executed) or it is immediately executed. Receive Execution Report.
2.	Repeat step 1 at least 5 minutes – generating automatically the ClOrdID/QuoteMsgId/Client Order Id	Confirm that the fields ClOrdID/QuoteMsgId/Client Order Id are automatically generated.

Note: please notify to Exchange if the application will not automatically generate the ClOrdID/QuoteMsgId/Client Order Id for each transaction. This test case will be not validated during conformance session.

5.3.3 Incoming Order Source

Type: FIX/Native Gateways	ID #: TLX-006
Description: Validate Orders during Continuous Trading.	
Comments: Order source field has to be filled.	
Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case.	

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#	Test Steps	Expected Results
1.	Enter order and force the Incoming Order Source. <i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i>	Order is accepted/executed Receive Execution Report

5.3.4 Market Order

Type: FIX/Native Gateways		ID #: TLX-007
Description: Validate Aggressive Market orders during Continuous Trading.		
Comments:		
Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case		
#	Test Steps	Expected Results
1	Enter an Aggressive Market order (OrderType=1). <i>(Assuming there are matching orders for this order on the order book. If there are no matching orders on the order book, please create these.)</i> <i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i>	The order is executed. Receive Execution Report
2.	Enter another Aggressive Market Order that matches against multiple resting orders <i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i>	The order trades resulting in multiple execution fills.

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5.3.5 IOC and/or FOK

Type: FIX/Native Gateways		ID #: TLX-008
Description: Validate <i>Aggressive</i> orders (IOC and/or FOK) during Continuous Trading.		
Comments:		
Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case		
#	Test Steps	Expected Results
1.	Enter an order with IOC and/or FOK time in force <i>(Assuming there are matching orders for this order in the order book. If there are no matching orders in the order book, please create them.)</i> <i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i>	The order is immediately executed or eliminated Receive Execution Report

5.3.6 Limit Order

Type: FIX/Native Gateways		ID #: TLX-009
Description: Validate Limit orders during Continuous Trading.		
Comments:		

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Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case

#	Test Steps	Expected Results
1.	<p>Enter a <u>day Limit order</u>.</p> <p><i>(Assuming there are matching orders for this order in the order book. If there are no matching orders in the order book, please create them.)</i></p> <p><i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i></p>	<p>The order goes on to the order book and/or executed.</p> <p>Receive Execution Report</p>

5.3.7 Limit order with capacity Agency and Account populated (AOTC)

Type: FIX/Native Gateways		ID #: TLX-09b
Description: Validate Limit order having capacity set = Agency and Account populated (not equal BLANK)		
Comments: Note: This test verifies that customers handle the account field.		
Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case		
#	Test Steps	Expected Results
1.	<p>Enter an ordinary Passive Limit order with following parameters:</p> <p>Capacity = Agency = AOTC (any other trading capacity)</p> <p>Account = any value (Not BLANK)</p> <p><i>(Assuming there are matching orders for this order in the order book. If there are no matching orders in the order book, please</i></p>	<p>The order goes on to the order book and rests</p> <p>Receive Execution Report</p>

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<p><i>create them.)</i></p> <p><i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i></p>	
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5.3.8 Limit order with capacity Matched Principal (MTCH)

Type: FIX/Native Gateways	ID #: TLX-09c	
Description: Validate Limit order having capacity set Matched Principal (MTCH)		
Comments: Note: Test is only for Broker compID – <i>TX1234NTV00</i> or <i>TX1234FTV00</i>		
Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case		
#	Test Steps	Expected Results
1.	<p>Enter an ordinary Passive Limit order with following parameters:</p> <p>Capacity = Matched Principal (MTCH)</p> <p>Account = any value (Not BLANK)</p> <p><i>(Assuming there are matching orders for this order in the order book. If there are no matching orders in the order book, please create them.)</i></p> <p><i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i></p>	<p>The order goes on to the order book and rests</p> <p>Receive Execution Report!</p>

5.3.9 Limit order with capacity Unmatched Principal

Type: FIX/Native Gateways	ID #: TLX-09d
Description: Validate Limit order having capacity set UnMatched Principal	

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Comments: Note: Test is only for Broker compID – *TX1234NTV00* or *TX1234FTV00*

Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case

#	Test Steps	Expected Results
1.	<p>Enter an ordinary Passive Limit order with following parameters:</p> <p>Capacity = UnMatched Principal</p> <p>Account = any value (Not BLANK)</p> <p><i>(Assuming there are matching orders for this order in the order book. If there are no matching orders in the order book, please create them.)</i></p> <p><i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i></p>	<p>The order goes on to the order book and rests</p> <p>Receive Execution Report!</p>

5.3.10 Order Modification

Type: FIX/Native Gateways **ID #:** TLX-010

Description: Validate order Modification during Continuous Trading.

Comments:

Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case

#	Test Steps	Expected Results
2.	<p>Enter a passive order that rests on the order book.</p> <p><i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i></p>	<p>The order is successfully submitted and resides on the order book.</p> <p>Receive Execution Report with ExecType = 0</p>

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		(New)
3.	Amend order. <i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i>	The order is successfully modified. Receive Execution Report with ExecType = 5 (Replaced)

5.3.11 Order Cancel

Type: FIX/Native Gateways		ID #: TLX-011
Description: Validate order deletion during Continuous Trading.		
Comments:		
Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case		
#	Test Steps	Expected Results
1.	Enter a passive order that rests on the order book. <i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i>	The order is successfully submitted and resides on the order book. Receive Execution Report with ExecType = 0 (New)
2.	Cancel the order. <i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i>	The order is successfully cancelled. Receive Execution Report with ExecType = 4 (Cancelled)

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5.3.12 Cancel on Disconnect

Type: FIX/Native Gateways		ID #: TLX-012
Description: Validate Cancel-on-Disconnect and Logout		
Comments: If a different User ID/Comp ID has been specifically enabled for “Cancel on disconnect/Logout” for this test case please repeat test case TLX-007 first to Logon. Customers are highly encouraged to utilise the Cancel on Disconnect functionality		
Prerequisites: Already logged on from previous Test Case		
#	Test Steps	Expected Results
1.	Enter 3 passive regular orders that rest on the orderbook. <i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i>	The orders are successfully submitted and have a Live order status.
2.	Terminate the client-server session by either TCP disconnect for Cancel on disconnect or Logout for cancel on logout.	Client-server session is terminated. (TCP connection dropped or Logout.)
3.	Establish a connection and Logon.	Successful Logon.
4.	Verify the status of orders submitted in step 1 above.	<ul style="list-style-type: none">• FIX Execution reports received for all cancelled orders automatically.• Native: Session active with heartbeating
5.	For native trading, the customer must recover the missed messages via the recovery channel	Execution reports received for all cancelled orders

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	manually.	from the recovery channel.
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5.4 Specialist User Tests(MM/LP)/Quote Management

5.4.1 Establish a connection and Logon

Type: FIX/Native Gateways		ID #: TLX-013
Description: Establish a connection and Logon.		
Comments:		
Prerequisites: Specialist (MM/LP) user should be configured		
#	Test Steps	Expected Results
1.	Establish a connection and Logon. <i>Please provide CompID/Target User.</i>	Successful Logon.

5.4.2 Quote entry during quoting period

Type: FIX/Native Gateways		ID #: TLX-014
Description: Validate quote submission during quoting period		
Comments: Quote has to be anonymous		
Prerequisites: This test needs to be executed during Quoting period session. Already logged on from previous Test Case		
#	Test Steps	Expected Results

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1.	<p>Enter an Executable quote that rests on the order book</p> <p><i>Please provide QuoteMsgID/ Client Order ID in the Certification Report.</i></p>	<p>The quote is successfully submitted.</p> <p>FIX:</p> <ul style="list-style-type: none"> Receive Quote Status Report <p>Native:</p> <ul style="list-style-type: none"> Receive Execution report for each side of quote.
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5.4.3 Quote during Continuous Trading

Type: FIX/Native Gateways		ID #: TLX-015
Description: Validate Executable quote submission.		
Comments: Quote has to be anonymous		
Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case		
#	Test Steps	Expected Results
2.	<p>Enter an Executable quote that rests on the order book</p> <p><i>Please provide QuoteMsgID/ Client Order ID in the Certification Report.</i></p>	<p>The quote is successfully submitted.</p> <p>FIX:</p> <ul style="list-style-type: none"> Receive Quote Status Report <p>Native:</p> <ul style="list-style-type: none"> Receive Execution report for each side of quote.

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5.4.4 Quote with capacity = G

Type: FIX/Native Gateways		ID #: TLX-015b
Description: Validate Executable quote submission having capacity = G		
Comments: Quote has to be anonymous and capacity = G		
Prerequisites This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case		
#	Test Steps	Expected Results
1.	Enter an Executable quote that rests on the order book setting capacity = G <i>Please provide QuoteMsgID/ Client Order ID in the Certification Report.</i>	The quote is successfully submitted. FIX: Receive Quote Status Report Native: Receive Execution report for each side of quote.

5.4.5 Order with capacity = G

Type: FIX/Native Gateways		ID #: TLX-015c
Description: Validate new order submission having capacity = G		
Comments: LP/MM should be able to submit order with capacity = G		
Prerequisites This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case		
#	Test Steps	Expected Results

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1	Enter a New order that rests on the order book setting capacity = G <i>Please provide QuoteMsgID/ Client Order ID in the Certification Report.</i>	The order is successfully submitted. Receive Execution Report
---	---	--

5.4.6 Modify Executable Quote

Type: FIX/Native Gateways	ID #: TLX-016	
Description: Modify Executable quote.		
Comments: Quote has to be anonymous		
Prerequisites This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case.		
#	Test Steps	Expected Results
1.	Enter an Executable quote that rests on the order book <i>Please provide QuoteMsgID/Client Order ID in the Certification Report.</i>	The quote is successfully submitted. FIX: <ul style="list-style-type: none">• Receive Quote Status Report Native: <ul style="list-style-type: none">• Receive Execution report for each side of quote.
2.	Modify the quote. (Please note for both FIX and Native a quote is amended by entering another quote. This replaces the existing quote on the quote book as you can only have one quote on the book for any given instrument.) <i>Please provide new QuoteMsgID/Client Order ID in the certification report.</i>	The quote is successfully amended. (Replaced with new quote) FIX: <ul style="list-style-type: none">• If the quote rests on the order book, a Quote Status Report is recieved• If the quote is fully or partially filled, Execution Report(s) are recieved (please provide CIOrdIDs)

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		Native: <ul style="list-style-type: none"> Receive Execution report for each side of quote.
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5.4.7 Cancel Executable Quote

Type: FIX/Native Gateways		ID #: TLX-017
Description: Cancel Executable quote.		
Comments: Quote has to be anonymous		
Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case.		
#	Test Steps	Expected Results
1.	Enter an Executable quote that rests on the order book <i>Please provide QuoteMsgID/Client Order ID in the Certification Report.</i>	The quote is successfully submitted. FIX: <ul style="list-style-type: none"> Receive Quote Status Report Native: <ul style="list-style-type: none"> Receive Execution report for each side of quote.
2.	Cancel the quote just entered. FIX: <ul style="list-style-type: none"> Send Quote Cancel message Native: <ul style="list-style-type: none"> Send Order Cancel Request messages 	The quote is successfully cancelled. FIX: <ul style="list-style-type: none"> Receive Quote Status Report Native: <ul style="list-style-type: none"> Receive Execution Report for each quote side cancelled.

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5.4.8 Single Side Quote

Type: FIX/Native Gateways		ID #: TLX-018
Description: Validate Executable Quote submission Continuous Trading session		
Comments: Quote has to be anonymous		
Prerequisites This test needs to be executed during Continuous Trading session . Already logged on from previous Test Case.		
#	Test Steps	Expected Results
1.	Enter an Executable Single Side Quote <i>Please provide QuoteMsgID/ Client Order ID in the Certification Report.</i>	The quote is successfully submitted. Receive Quote Status Report Receive Execution Report

5.4.9 Modify Executable Single Side Quotes

Type: FIX/Native Gateways		ID #: TLX-019
Description: Validate Modify Executable Single Side Quotes.		
Comments: Quote has to be anonymous		
Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case.		

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#	Test Steps	Expected Results
1.	<p>Enter an Executable single side quote.</p> <p>(Assuming this quote is not fully or partially filled)</p> <p><i>Please provide QuoteMsgID/Client Order ID in the Certification Report.</i></p>	<p>The single side quote is successfully submitted.</p> <p>FIX: Receive Quote Status Report</p> <p>Native: Receive Execution report</p>
2.	<p>Modify the single side quote price or quantity</p> <p><i>(Please note for both FIX and Native a SS quote is amended by entering another SSquote. This replaces the existing SS quote on the quote book as you can only have one SS quote on the book for any given instrument.)</i></p> <p><i>Please provide new SS QuoteMsgID/Client Order ID in the certification report.</i></p>	<p>The SS quote is successfully amended.</p> <p>(Replaced with new single side quote)</p> <p>FIX: Receive Quote Status Report</p> <p>If the SS quote is fully or partially filled: Receive Execution Report (please provide ClOrdID)</p> <p>Native: Receive Execution report</p>

5.4.10 Cancel Executable Single Side Quotes

Type: FIX/Native Gateways	ID #: TLX-020
Description: Validate Cancel Executable Single Side Quotes.	
Comments: Quote has to be anonymous	
Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case.	

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#	Test Steps	Expected Results
1.	Cancel the Single Side quote entered in the previous test case. FIX: Send Quote Cancel message Native: Send Order Cancel Request message	The SS quote is successfully cancelled. FIX: Receive Quote Status Report Native: Receive Execution Report.

5.5 Supervisor User Tests

5.5.1 Establish a connection and Logon

Type: FIX		ID #: TLX-021
Description: Establish a connection and Logon.		
Comments:		
Prerequisites: Supervisor profile		
#	Test Steps	Expected Results
1.	Establish a connection and Logon. <i>Please provide CompID.</i>	Successful Logon.

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5.5.2 Mass Cancellation

Type: FIX		ID #: TLX-022
Description: Validate Mass Cancellation orders for member firm		
Comments: Mass Cancellation does not cancel orders in Trading Stop Session status.		
Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case.		
#	Test Steps	Expected Results
1.	Enter Mass Cancel request for member firm. <i>(Assuming there is at least one order in the order book. If there are no orders in the order book, please request to another user to create it.)</i>	The Mass Cancel is successfully executed. Receive Order Mass Cancel Report Orders in Trading Stop Session are not cancelled.

5.5.3 Orders Deletion

Type: FIX		ID #: TLX-023
Description: Validate Orders Deletion during Continuous Trading.		
Comments:		
Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case		
#	Test Steps	Expected Results

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1.	<p>Cancel a entered another user</p> <p><i>(Assuming there is at least one order in the order book. If there are no orders in the order book, please request to another user to create it.)</i></p> <p><i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i></p>	<p>The order is successfully cancelled.</p> <p>Receive Execution Report</p> <p>No Execution Report are sent to user that are entered the order.</p>
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5.6 Native Recovery

5.6.1 Requesting Missed Messages

Type: Native Recovery Gateway	ID #: TLX-024	
Description: This test case validates that native recovery works by sending a Missed Message Request for all AppIDs (LoadIDs).		
Comments: The same ComplD and password must be used for both Native Trading and Native Recovery services.		
Prerequisites: Already logged on to the Native Trading Gateway from previous trading test case. Cancel-on-Disconnect needs to be enabled on the ComplD used for testing.		
#	Test Steps	Expected Results
1.	<p>Enter 3 passive orders that rest on the orderbook, on .</p> <p><i>(the LoadID for each instrument can be obtained from the Instrument.csv reference data file.)</i></p>	3 orders are now resting on the orderbook,

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2.	If cancel-on-disconnect is enabled: <ul style="list-style-type: none">• drop the connection	While the CompID is disconnected, the open orders are cancelled
3.	Wait 30 seconds, and then establish a connection to the Native Gateway real-time channel <i>(This needs to happen before connecting to the recovery channel)</i>	Successful logon to the Native Gateway real-time channel.
4.	Establish a connection and Logon to the Native Recovery Channel	Successful logon to the Native Gateway recovery channel
5.	Send a Missed Message Request for the required AppID specifying the LastMsgSeqNum that is known for that AppID /LoadID.	<ul style="list-style-type: none">• Missed Message Request Is Sent• Missed Message Request Ack received with ResponseType=0 (Successful)• Execution Report(s) received for each cancelled order• Missed Message Report received with ResponseType=0 (Download Complete)
6.	Logout from the Native Recovery service within 3 heartbeat intervals <i>(The server will disconnect customer connection if there is no activity for 3 heartbeat intervals)</i>	Logout successful and Recovery session terminated Connection to the Realtime Channel should remain active and heartbeating.

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5.7 Post Trade Gateway Validation

5.7.1 Establish Logon for Test Cycle

Type: Post Trading Gateway		ID #: TLX-025
Description: Establish a connection and Logon.		
Comments:		
Prerequisites: None.		
#	Test Steps	Expected Results
1.	Establish a connection and Logon to the Post Trade Gateway.	Successful Logon.

5.7.2 Own Trade Book Download

Type: Post Trading Gateway		ID #: TLX-026
Description: Validate Own Trades Book Download.		
Comments:		
Prerequisites: Already logged on from previous Test Case.		
#	Test Steps	Expected Results
1.	Send a Trade Capture Report Request. <i>Please provide TradeRequestID in the Certification Report.</i>	Receive a Trade Capture Report Request Ack Receive Trade Capture Report(s) as requested

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5.8 Drop Copy Gateway Validation

5.8.1 Establish Logon for Test Cycle

Type: Drop Copy Gateway		ID #: TLX-027
Description: Establish a connection and Logon.		
Comments:		
Prerequisites		
#	Test Steps	Expected Results
1.	Establish a connection and Logon to the Drop Copy Gateway.	Successful Logon.

5.8.2 Own Order Book Download

Type: Drop Copy Gateway		ID #: TLX-028
Description: Validate Own Order Book Download		
Comments:		
Prerequisites: Already logged on from previous Test Case.		
#	Test Steps	Expected Results
1.	Send a Mass Order Status Request. <i>Please provide MassStatus ReqID and the Trader Group in the Certification Report</i>	Receive Execution Report for each active order for the specified Trader Group.

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5.9 On Behalf of Actions Native & FIX Trading Gateways

5.9.1 Cancel Client's Order

Type: On behalf of – Fix/Native Gateways		ID #: TLX-029
Description: Exchange cancels an order on behalf of a customer.		
Comments:		
Prerequisites: Contact LSEG for executing this test in co-ordination with customer. Already logged on from previous Trading test case.		
#	Test Steps	Expected Results
1.	Customer to Enter a passive order that rests on the order book <i>Please provide Order ID(s) and Client Order ID in the Certification Report.</i>	The order is successfully submitted and resides on the order book. Receive Execution Report
2.	Request LSEG to cancel the order, stating the OrderID LSEG cancel the orders as requested.	The order is successfully cancelled. Receive Execution reports with exec type (4).
3.	Customer to confirm receipt of unsolicited messages	

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5.9.2 Cancel Client's Quote

Type: On behalf of – Fix/Native Gateways		ID #: TLX-030
Description: Exchange cancels an order on behalf of a customer.		
Comments:		
Prerequisites: Contact LSEG for executing this test in co-ordination with customer. Already logged on from previous Trading test case.		
#	Test Steps	Expected Results
1.	Customer enters an executable quote that rests on the orderbook. <i>Please provide QuoteMsgID/ Client Order ID in the Certification Report.</i>	If quoting is supported, quote is submitted and resting on the order book. If quoting not supported move onto step 3.
2.	Request LSEG to cancel the quote stating QuoteMsgIDs LSEG cancel the quotes as requested.	The order is successfully cancelled. Receive Execution reports with exec type (4).
3.	Customer to confirm receipt of unsolicited messages	

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5.10 All Gateways

5.10.1 Error Handling

Type: Error Handling		ID #: TLX-031
Description: Verifying Logon after Suspension / Un-suspension of UserID.		
Comments: This test case needs to be repeated for every interface/service the customer subscribes to. This test needs to be completed (where applicable) for the services listed below: <ul style="list-style-type: none">• FIX Gateway• Native Gateway• Native Recovery• Drop Copy Gateway• Post Trade Gateway• ITCH Replay Service (any one channel)• ITCH Recovery Service (any one channel) <p>When executing this test case for Market Data Services, please choose any one channel to connect to and provide details in the comments section of the Certification Report.</p>		
Prerequisites: CompID / UserID is logged off		
#	Test Steps	Expected Results
1	Request LSEG to suspend the CompID.	CompID is suspended.
2	Establish a connection and Logon to the applicable Gateway(s). Customer to verify the reject message.	Logon is rejected. Customer application should automatically stop trying to logon and display the reason the logon was unsuccessful.

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4	Verify application behaviour conforms to the connectivity policy as outlined in the Technical Specification	Customer application attempts to connect a maximum of 3 times to the primary gateway with a minimum timeout value of 3 seconds between attempts before attempting to connect to the secondary gateway – and this should be retried a maximum of a further 3 times.
5	Request LSEG to un-suspend CompID	CompID un-suspended
6	Establish a connection and Logon Gateway	Successful Logon

5.11 FIX Session Level Testing

5.11.1 Heartbeat Exchange

Type: FIX Session Testing	ID #: TLX-032	
Description: The client and the server are exchanging Heartbeat messages during the period of client's inactivity.		
Comments:		
Prerequisites: Customer application can suspend sending all messages except heartbeats. (Heartbeats are only sent during periods of inactivity).		
#	Test Steps	Expected Results
1.	<i>Document the time of test execution start in the Certification report.</i>	
2.	Establish a connection and Logon to the Gateway.	Successful Logon.
3.	Stay inactive, i.e. make sure that there are no client initiated messages sent to the server.	<ul style="list-style-type: none">• There are no client initiated messages sent to the Gateway.• Gateway is sending Heartbeat messages

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	Make sure there are no unexpected disconnects within reasonable (a few minutes) timeframe.	<p>to the client.</p> <ul style="list-style-type: none"> Client is sending Heartbeat messages to the Gateway.
4	<i>Document the time of test execution end in the Certification Report and document whether or not disconnects happen during test execution.</i>	

5.11.2 Test Request

Type: FIX Session Testing		ID #: TLX-033
Description: The client is sending Heartbeat message back to a Test Request message initiated by the server.		
Comments:		
Prerequisites: Customer application can suspend sending all messages to the gateway temporarily. Customer application can manually send a test request		
#	Test Steps	Expected Results
1.	<i>Document the time of test execution start in the Certification Report.</i>	
2.	Establish a connection and Logon to the Gateway.	Successful Logon.
3.	<p>Disable all client messages, i.e. make sure that there are no client side messages (including Heartbeat messages) sent to the server.</p> <p>Wait for the Gateway to send a Test Request message.</p>	<ul style="list-style-type: none"> There are no client side messages sent to the server. Server is sending Heartbeat messages to the client. Client is not responding to Heartbeat messages sent by the server. Server is sending a Test Request

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		message. <ul style="list-style-type: none">• Client should respond with a Heartbeat message including TestReqID(112).
4.	Customer to send a Test Request	Gateway responds with Heartbeat message including TestReqID(112).
5.	<i>Document the time of test execution end in the Certification Report and document whether or not disconnects happen during test execution.</i>	

5.11.3 Inactivity Disconnect

Type: FIX Session Testing	ID #: TLX-034	
Description: Terminating a FIX session on client's inactivity.		
Comments:		
Prerequisites: Customer must be able to suspend sending any messages to the gateway manually.		
#	Test Steps	Expected Results
1.	<i>Document the time of test execution start in the Certification Report.</i>	
2.	Establish a connection and Logon to the Gateway.	Successful Logon.
3.	Disable all client messages, i.e. make sure that there are no client side messages sent to the server.	<ul style="list-style-type: none">• There are no client side messages sent to the server.• Server is sending Heartbeat messages to the client.• Client is <u>not</u> sending Heartbeat messages to the server.

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		<ul style="list-style-type: none"> • Server is sending a Test Request message. • Client is <u>not</u> responding to the Test Request message. • Server disconnects the client.
4.	<i>Document the time of test execution end in the Certification Report.</i>	

5.11.4 Sequence Reset

Type: FIX Session Testing		ID #: TLX-035
Description: FIX message Sequence Reset.		
Comments:		
Prerequisites		
#	Test Steps	Expected Results
1.	<i>Document the time of test execution start in the Certification report.</i>	
2.	Establish a connection and Logon to the Gateway.	Successful Logon.
3.	<p>Make sure that the client and Server are exchanging Heartbeat messages.</p> <p>Send a Sequence Reset message MsgType=4.</p> <p>Make sure that the value of the NewSeqNo tag is greater than the sequence number of the latest incoming Heartbeat message.</p>	<p>Gateway is sending Heartbeat messages to the client.</p> <p>Client is responding to Heartbeat messages sent by the server.</p> <p>Gateway resets messages sequence number to the value specified in NewSeqNo tag sent by the client.</p>

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4.	<i>Document the time of test execution end in the Certification Report.</i>	
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5.11.5 Sequence Reset at Logon

Type: FIX Session Testing		ID #: TLX-036
Description: FIX messages Reset initiated by the client at Logon.		
Comments: This test is mandatory		
Prerequisites:		
#	Test Steps	Expected Results
1.	<i>Document the time of test execution start in the Certification Report.</i>	
2.	Establish a connection and Logon to the Gateway.	Successful Logon.
3.	Make sure that the client and Server are exchanging Heartbeat messages and inbound and outbound MsgSeqNum is > 10.	<ul style="list-style-type: none">• Server is sending Heartbeat messages to the client.• Client is sending Heartbeat messages to the server.
4.	Disconnect from the server.	FIX session is terminated.
5.	Client to set the next expected inbound and outbound MsgSeqNumbers to 1. Send a Logon message with ResetSeqNumFlag tag set to "Y".	<ul style="list-style-type: none">• Server is responding with a Logon message with the ResetSeqNumFlag tag set to "Y".• Messages sequence is reset to "1".• Server and Client sending heartbeat messages

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6.	<i>Document the time of test execution end in the Certification Report.</i>	
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5.11.6 Resend Request

Type: FIX Session Testing		ID #: TLX-037
Description: Client Resend Request.		
Comments:		
Prerequisites: Customer application needs to support manually setting the next expected inbound MsgSeqNum (tag34).		
#	Test Steps	Expected Results
1.	<i>Document the time of test execution start in the Certification Report.</i>	
2.	Establish a connection and Logon to the Gateway.	Successful Logon.
3.	Submit an order that results in a fully filled trade Note down the Message Sequence number received for this execution report.	The trade execution report received.
4.	Submit a Logout request	Logout acknowledged by gateway
5.	Customer to manually set their next expected inbound MsgSeqNum to the value obtained in step 3	Customer application's next expected inbound MsgSeqNum reconfigured.
6.	Reconnect and log on.	Logon successful.

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7.	Customer application should detect a sequence number gap and send a Resend Request (MsgType=2) with tags BeginSeqNo and EndSeqNo set to the value obtained in step 3	Gateway will resend the Execution Report back to the client, with PossDup(43)=Y. Gateway will send a SeqReset with the next expected sequence number in tag 36. Session should remain active with heartbeats being exchanged.
8.	<i>Document the time of test execution end in the Certification Report.</i>	

5.12 Request for Quote RFQ

5.12.1 Establish a connection and Logon

Type: Request for Quote RFQ		ID #: TLX-038
Description: Establish a connection and Logon.		
Comments:		
Prerequisites: Trading compids (Broker *FT0/NT0* or *FTR/NTR*, i.e. TX0000FTR/NTR* i.e. TX0000FT0/NT0*) or dedicated compID (*FTR/NTR*, i.e. FS1234NTR00 or FF1234FTR00) is enabled to this functionality.		
#	Test Steps	Expected Results
1	Establish a connection and Logon. Please provide CompID.	Successful Logon.

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5.12.2 Submit Manual RFQ – Requestor

Type: Submit Manual RFQ – Requestor		ID #: TLX-039
Description: Validation of Quote request message sent by Customer /Requestor		
Comments: CompID is enabled to this functionality - Private quote request message		
Prerequisites: Trading compids (Broker *FT0/NT0* or *FTR/NTR*, i.e. TX0000FTR/NTR* i.e. TX0000FT0/NT0*) or dedicated compID (*FTR/NTR*, i.e. FS1234NTR00 or FF1234FTR00) is enabled to this functionality. This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case. Contact LSEG, Market Access Italy, for executing the coordinated test		
#	Test Steps	Expected Results
1	Enter a RFQ Request (Named and Anonymous) FIX: Quote request(R) tag 303=1 (QuoteRequestType) Absence of this field is considered as Manual Native: Quote request (a) QuoteRequestType=0 (Manual) Please provide RFQID in the Certification report.	The RFQ is successfully submitted. Receive Quote Status Report FIX: Receive AI message (Quote Status Report) QuoteStatus 297=0 Native: Receive Quote Status Report QuoteStatus=1

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5.12.3 Submit AUTO RFQ Request

Type: Submit AUTO RFQ Request		ID #: TLX-039b
Description: Validation of Quote request AUTO message sent by Customer /Requestor		
Comments: CompID is enabled to this functionality - Private quote request message		
<p>Prerequisites: This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case.</p> <p>The requester will be able to send the following execution instructions when submitting the Auto RFQ:</p> <ul style="list-style-type: none">• Disclose Side: whether to pass through the side to market makers or not.• Limit Price: RFQ will only be executed with the best contra quote if the quote's price is better than or equal to the RFQ's limit price.• Execution Delay: defines the duration in seconds beyond which the RFQ will be executable from the time the RFQ was submitted.• Min Number of quotes: defines the minimum number of live contra quotes to be considered to trigger the execution. <p>However if the requester does not specify a value for Execution Delay and Min Number of quotes then the values defined by the Exchange will be applied as defined below: Min Number of quotes= 2; Execution Delay= 20 seconds.</p> <p>The system will automatically match an Auto RFQ when all the following criteria are met:</p> <ul style="list-style-type: none">• Duration specified under the Execution Delay is reached.• Number of contra quotes are greater than or equal to the Min Number of Quotes.• The best contra quote's price is better than or equal to the Limit Price <p>When at least one condition is not met the RFQ will not be executed and all the quotes submitted in response to the RFQ will remain open unless cancelled by the market makers.</p>		
#	Test Steps	Expected Results
1	Enter a Request for Quote message AUTO FIX: Quote request(R) tag 303=2 (QuoteRequestType) Absence of this field is considered as Manual Native: Quote request (a) QuoteRequestType = 1 (Auto)	The RFQ AUTO request is successfully submitted. FIX: Quote status report (AI) Native: Quote status report (c) <i>Please provide RFQID in the Certification report.</i>

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5.12.4 Accepting a Quote submitted by Market Maker - Manual RFQ

Type: Accepting a Quote submitted by Market Maker - Manual RFQ		ID #: TLX-040
Description: Validation of Quote request message sent to the Customer. Market Maker wish to response to the submitted RFQ		
Comments: Contact LSEG, Market Access Italy, for executing the coordinated test. Market Access Analyst sent a Private RFQ to the Customer		
Prerequisites: Dedicated compids enabled to this functionality (Market Maker). Please verify to have the comp id before to start the certification This test needs to be executed during Continuous Trading session. Contact LSEG, Market Access Italy, for executing this coordinated test		
#	Test Steps	Expected Results
1	Market Access Analyst sent two Private RFQ to the customer with a RFQID	Customer receive the Quote request messages
2	Customer (as Market Maker) have to accept one RFQ request and refuse the other one (Quote request reject message) FIX: Quote(S) to accept the RFQ Quote Request reject (AG) Native: RFQ Quote (d) to accept the RFQ Quote Request reject (b) Please provide RFQID in the Certification report	Market maker received: FIX: Quote Ack(CW) when it is accepted Quote Response (AJ) when it is rejected Native: Quote Ack(e) when it is accepted Quote Response (f) when it is rejected Market Access Analyst accept the Quote. Execution Report (8) or RFQ Execution Report (g) have been sent to Market Maker.

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5.12.5 Automatic Execution – Auto RFQ

Type: Automatic Execution – Auto RFQ		ID #: TLX-041
Description: Validation of Quote request Auto. The system will automatically match an Auto RFQ		
Comments: Market Access Analyst sent a Private RFQ AUTO to the Customer		
Prerequisites: Contact , Market Access Italy, for executing this test in co-ordination with customer. This test needs to be executed during Continuous Trading session. Already logged on from previous Test Case. The system will automatically match an Auto RFQ when all the following criteria are met: <ul style="list-style-type: none">- Duration specified under the Execution Delay is reached.- Number of contra quotes are greater than or equal to the Min Number of Quotes.- The best contra quote's price is better than or equal to the Limit Price When the above three conditions are met, the RFQ is executed with the best quote prioritized using price/ time priority. <p>To avoid market makers knowing the exact time of matching a configured random period precedes the final match. When at least one condition is not met the RFQ will not be executed and all the quotes submitted in response to the RFQ will remain open unless cancelled by the market makers.</p> <p>Even if the RFQ is not executable at the initial trigger time, the RFQ could be executable after a Limit price amendment or after new quotes are submitted or the existing quotes are amended. When the RFQ expiration time is reached, the RFQ and all the open quotes of the RFQ will be expired</p>		
#	Test Steps	Expected Results
1	Market Access Analyst sent Private RFQ AUTO to the customer with a RFQID as a REQUESTOR	Customer receive the Quote request messages
2	Customer (as Market Maker) have to accept the RFQ request FIX: Quote(S) to response to the RFQ request Native: RFQ Quote (d) to response to the RFQ request Please provide RFQID in the Certification report	Market maker received: FIX: Quote Ack(CW) when it is accepted Execution Report (8) filled Native: Quote Ack(e) when it is accepted RFQ Execution Report (g) filled

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5.13 Trade Amendments

5.13.1 Trade Amendments - Price

Type: Trade Amendments – Price		ID #: TLX-042
Description: Trade Amendments - Price		
Comments: Market Access Analyst amend the price of any trade. The client will receive the notification: trade correct (G) in the execution report..		
Prerequisites: Contact Market Access team for executing this test in co-ordination with customer. Already logged on from previous Trading test case.		
#	Test Steps	Expected Results
1	Customer to Enter an aggressive order that trades as full filled. Please provide TradeMatchID, Order ID and Client Order ID in the Certification Report	Receive Execution Report for the execution..
2	Request Market Access Analyst to update the trade for price amend	Execution report would be sent with Exec Type = Trade Correct (G)

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5.13.2 Trade Amendments - Quantity FULL Execution

Type: Trade Amendments - Quantity FULL Execution		ID #: TLX-043
Description: Trade Amendments - Quantity Decreases		
<p>Comments: Market Access team amend the quantity of fully executed trade. The client will receive two notifications: one for the trade correct and another for the order restatement.</p>		
<p>Prerequisites: Contact Market Access team for executing this test in co-ordination with customer. Already logged on from previous Trading test case.</p>		
#	Test Steps	Expected Results
1	<p>Customer to Enter an aggressive order that trades as fully filled. (OrderStatus = 2) with Order Quantity 200</p> <p>Please provide TradeMatchID, Order ID and Client Order ID in the Certification Report</p>	<p>The order is successfully submitted and resides on the order book.</p> <p>Receive Execution Report for fully filled.</p>
2	<p>Request LSEG to update the trade – Quantity decrease</p> <p>Executed Quantity is amended by LSEG to 100</p>	<p>After the Amend:</p> <p>Step 1 Order Qty (200) = Executed Qty (100) + Leaves Qty (100) → an Execution report would be sent with Order Status = Partially Filled and Exec Type = Trade Correct</p> <p>Step 2: Order Qty (100) = Executed Qty (100) + Leaves Qty (0) → an Execution report would be sent with Order Status = Filled and Exec Type = Restated</p>

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5.13.3 Trade Amendments - Quantity Partially Execution

Type: Trade Amendments - Quantity Partially Execution		ID #: TLX-044
Description: Trade Amendments - Quantity Decreases		
Comments: Market Access team amend the quantity of partially executed trade . The client will receive two notifications: one for the trade correct and another for the order restatement.		
Prerequisites: Contact Market Access team for executing this test in co-ordination with customer. Already logged on from previous Trading test case.		
#	Test Steps	Expected Results
1	Customer to Enter an aggressive order that trades as partially filled (OrderStatus = 1) with Order Quantity 1200 and Executed quantity 500. Order Qty (1200) = Executed Qty (500) + Leaves Quantity (700) Please provide TradeMatchID, Order ID and Client Order ID in the Certification Report	Receive Execution Report for partial fill.
2	Request LSEG to update the trade – Quantity decrease Executed Quantity is amended by LSEG from 500 to 300	After the Amend: Step 1 Order Qty (1200) = Executed Qty (300) + Leaves Qty (900) → an Execution report would be sent with Order Status = Partially Filled and Exec Type = Trade Correct Step 2: Order Qty (1000) = Executed Qty (300) + Leaves Qty (700) → an Execution report would be sent with Order Status = Partially Filled and Exec Type = Restated

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