

ASX New Trading Platform Application Conformance Process

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1. Introduction

The ASX Application Conformance Test Process is designed to help protect market participants from any erroneous application behaviour that may be disruptive to the Market due to non-conformance.

The following Conformance Test Process applies to any application that connects to the ASX Production environment for trading or market data services.

All customer applications must pass the ASX Conformance process prior to accessing the Production market for trading or receipt of market data.

Except for certain mandatory functions, customers are required to complete only the Conformance test scenarios which relate to the functionality they will use in the Production environment. All other test scenarios may be omitted.

1.1 Purpose

The purpose of this document is to provide an overview of the ASX NTP Conformance test and set expectations regarding conduct and expected results.

1.2 Readership

This document outlines the test phases customers need to pass to certify their Trading and Market Data related software applications.

Technical staff within ASX 24 participants and information vendors and other market participants that connect directly to the ASX New Trading Platform are expected to read this document and understand the requirements of this process.

1.3 Document History

Issue	Date	Description
1.0	June 2016	First release of document.
1.1	July 2016	4.4 Message Reject Handling – Changed to be Mandatory for FIX Order Entry applications only after receiving feedback from customers 4.7 Market Data Validation - New Scenario added 4.8 Trade Cancellation – New Scenario added 4.9 Account Disabled – New Scenario Added
1.2	July 2016	3.2.3 Derivative Security List Request – Added Notes, Test 1 or 2 to be completed



1.4 Enquiries

Please contact [CTS @ASX.com.au](mailto:CTS@ASX.com.au) or your Technical Account Manager if you have any questions relating to this document.

2. ASX Conformance Process

The ASX Conformance Process provides procedures that customers can use to ensure that their application software conforms to ASX operating rules and technical specifications.

ASX expects customers to become conversant with the ASX development platform and develop their applications to a state of readiness for Conformance testing. At this point they can contact ASX to schedule a date and time to undertake the Conformance test. ASX requires customers to have finalised their software, meaning that said software is in a “Production Ready” state, before booking the test.

Customers must submit an Application Conformance Pre-Test Checklist and indicate within, the test scenarios their application will not complete when arranging with CTS to undertake the Conformance test.

Customers perform the majority of the Conformance test unassisted and complete the process by advising CTS about start and end time of the self-test. CTS will then check the available logs to verify the result and produce a pass or fail report.

Once a pass is verified by CTS, customers can go on to complete the ASX-assisted test scenarios assisted by a member of the CTS team. CTS assisted test slots are of 30 minutes duration. If testing is not completed within a test slot, customers will need to book an additional slot.

2.1 When to Repeat Conformance Testing?

While customers are encouraged to perform regular Conformance testing, they must repeat Conformance testing of their software in these circumstances:

- When their Software is modified in any way that may affect or directly impact connectivity to ASX.
- When ASX upgrades or changes its production environment and deems the change mandatory.
- During extended periods of absence when the software is not connected to ASX.
- Upon specific request from the ASX.



2.2 Non-Compliant software



Warning:

ASX reserves the right to block access to the Production system by non-compliant software. ASX will require successful completion of a conformance test prior to re-connection.

2.3 Application Conformance Testing

To successfully complete Application Conformance Testing the customer's software application needs to have established a connection to the NTP Customer Development Environment (CDE/CDE+). This platform simulates the ASX production environment and is designed to give a "Production-like" platform to develop and test against.

2.4 Prior to Conformance

Customers should ensure they have read and understand the specification documents pertaining to the interfaces they are developing against.

Customers should then discuss the intended functionality of their applications with their TAMs to ensure all steps were followed and the process is fully understood.

The CTS team will be available to assist customers in completing their tests, if required.

Customers must submit the Application Conformance Pre-Test Checklist as provided by the CTS team with all functions not supported by the software clearly marked.

The Application Conformance Pre-Test Checklist must be sent to CTS@asx.com.au prior to the test to validate the successfully attempted test scenarios.

2.5 Expectations during Conformance

- Customers are responsible for ensuring prices and statistics relating to Market Data and Order Entry are calculated correctly and displayed according to best Market practices. The ASX provided Trading Terminal can be used as a reference to validate an accurate display of Market Data.
- Customer must maintain a stable connection throughout documented sequence of tests.
- Customers testing Market Data applications must ensure that securities with frequently updating information are thoroughly tested.



- Customers should refer to the [ASX 24 Operating Rules and Procedures](#) for guidelines on acceptable market behaviour. Adherence to these guidelines is required throughout all customer application conformance testing. Failure to comply with these guidelines will result in failure of the conformance test.
- Customers should perform all tests in the documented sequence.
- Use a single FIX session to complete all FIX protocol tests. The exception is Section 3.7 – Shared Order Group Management, which requires a second FIX session to complete Order Entry tests.
- During the Self and Assisted sections only the documented tests should be executed using the FIX session specified.
- DO NOT introduce any additional tests during the conformance test phase. The conformance test phase comprises of the start and end times supplied in your Application Conformance Test Checklist.



3. Self-testing for Conformance

The customer is responsible for completing this section of the conformance test without the direct supervision of ASX. All activities performed during this segment of the Conformance test are logged. On completion of this segment of the conformance test, ASX will review logs to ensure that applicable test scenarios were successfully completed by the customer application/s.

3.1 Connection

The following set of test scenarios define how applications must connect and disconnect from the environment to meet ASX conformance requirements.

3.1.1 Log on (FIX Order Entry & FIX Drop Copy)

Category	Mandatory – For FIX Order Entry and FIX Drop Copy applications
Description	<ul style="list-style-type: none">• The application must perform a standard Logon(35=A). The application must sustain connectivity and receive a successful connection acknowledgement.• The application must pass this test to progress to the next phase of functionality testing.
Notes	
Requirements	<ul style="list-style-type: none">• It is expected that the tester will have confirmed network connectivity to the testbed prior to commencement of accreditation• Customers must also ensure that a reasonable heartbeat interval has been set as part of their Logon message

#	Test Scenarios	Expected Results
1.	Establish a connection and log on to the drop copy gateway.	Participant receives an 'ack', Message Type = (A) confirming a successful log on, where SessionStatus=Session Active (1409 = 0). Application will then need to maintain a heartbeat.
2.	Establish a connection and log on to the order entry gateway.	Participant receives an 'ack', Message Type = (A) confirming a successful log on, where SessionStatus=Session Active (1409 = 0). Application will then need to maintain a heartbeat.

3.1.2 Log on (Market Data)

Category	Mandatory – For FIX Market Data applications	
Description	<ul style="list-style-type: none">• The application must perform a standard Logon(35=A).• The application must sustain connectivity and receive a successful connection acknowledgement.• The application must pass this test to progress to the next phase of functionality testing.	
Notes		
Requirements	<ul style="list-style-type: none">• It is expected that the tester will have confirmed network connectivity to the testbed prior to commencement of accreditation• Customers must also ensure that a reasonable heartbeat interval has been set as part of their Logon message	
#	Test Scenarios	Expected Results
1.	Establish a connection and log on to the gateway.	Participant sends tags 141=Y and 34=1 in a Logon message. Participant receives an 'ack', Message Type = (A) confirming a successful log on, where SessionStatus=Session Active (1409 = 0). Application will then need to maintain a heartbeat.

3.1.3 Logout

Category	Mandatory for all FIX applications	
Description	The purpose of this test is to ensure that applications log out gracefully.	
Notes		
Requirements		
#	Test Scenarios	Expected Results
1.	Log out gracefully and disconnect from the concurrent session.	Participant receives a Logout (5) message confirming a graceful log off.

3.1.4 Password Change

Category	Mandatory for all FIX applications	
Description	The purpose of this test is to ensure that the application can perform a password change as part of a logon to the environment to demonstrate to ASX that the application can manage its own password in day to day operations	
Notes	NTP application passwords expire every 90 days, and must be changed by the application prior to this or it will not be able to logon to the Exchange.	
Requirements	Applications must adhere to the ASX Password policy, outlined in Logon (A), NewPassword = (925).	
#	Test Scenarios	Expected Results
1.	Establish a connection and send new password to the exchange.	Participant sends a Logon (A) message where NewPassword (925) = the new application password which matches the ASX password policy.

3.2 Downloads

3.2.1 Market Definition Request

Category	Mandatory - For FIX Market Data Applications*	
Description	The purpose of this test is to ensure that the application can request and receive market and segment information. When transmitting the information about a segment, the BU message will indicate the market list it belongs to using ParentMktSegmID (1325). This information will be necessary to interpret Trading Session Status messages when they are sent. * This test is optional for customers who gather Market Definition information using the "Security List Request" message.	
Notes		
Requirements		
#	Test Scenarios	Expected Results
2.	Application sends through the (BT) message. Tags MarketID (1301) and MarketSegmentID (1300) are optional.	Application receives a (BU) message that provides the definitions for the relevant Market, Market Segments, and Business Data.

3.2.2 Security List Request

Category	Mandatory - For FIX Market Data Applications	
Description	<p>The purpose of this test is to ensure that the application can request and receive the details of the complete or specific list of securities available in the environment. This information would contain contract units, price movements, last trading day, and other information relevant to the contract.</p> <p>This information will relate to either Multi Leg or Single Future securities.</p>	
Notes	The customer can choose between test scenario 1 (all securities) or 2 (specific markets).	
Requirements		
#	Test Scenarios	Expected Results
1.	Application sends a SecurityListRequest (x) message formatted to request a list of securities. Specify tag 559=4 (All Securities) and 263=0 (Snapshot) or 263=1 (Snapshot+Updates). 263=1 is recommended.	Application will receive a SecurityList (y) message providing relevant information about either Multi Leg or Single Future contract specifications.
2.	Application sends a SecurityListRequest (x) message formatted to request a list of securities. Specify tag 559=5 (MarketID or MarketID + MarketSegmentID), 263=0 (Snapshot), or 263=1 (Snapshot+Updates), and values for tags 1301 (Market) and 1300 (Market List). 263=1 is recommended.	Application will receive a SecurityList (y) message providing relevant information about either Multi Leg or Single Future contract specifications.



3.2.3 Derivative Security List Request

Category	Mandatory – For FIX Market Data Applications	
Description	The purpose of this test is to ensure that the application can request and receive the details of all securities or a specific list of securities available in the environment. This information would contain strike prices, underlyings, CFI codes, expiries, and other textual information relevant to the contract.	
Notes	The customer can choose between test scenario 1 (all securities) or 2 (specific markets).	
Requirements		
#	Test Scenarios	Expected Results
1.	Application sends a DerivativeSecurityListRequest (z) message formatted to request a list of securities. Specify tag 559=4 (All Securities) and 263=0 (Snapshot), or 263=1 (Snapshot+Updates). 263=1 is recommended.	Application will receive DerivativeSecurityList (AA) message, which will provide the contract information.
2.	Application sends a DerivativeSecurityListRequest (z) message formatted to request a list of securities. Specify tag 559=5 (MarketID or MarketID + MarketSegmentID), 263=0 (Snapshot), or 263=1 (Snapshot+Updates), and values for tags 1301 (Market) and 1300 (Market List). 263=1 is recommended.	Application will receive DerivativeSecurityList (AA) message, which will provide the contract information.

3.2.4 Trading Session Status Request

Category	Mandatory - For FIX Market Data Applications*	
Description	<p>The purpose of this test is to ensure that the application can monitor the current session status for the markets, which it is intending to subscribe to. This dictates the valid list of actions an application can perform in that session.</p> <ul style="list-style-type: none"> • Applications will need to complete all three test scenarios. • Sending a Trading Session Status request will either provide a snapshot or subscription to receive Session Status updates. It can also be used to unsubscribe from these updates. <p>*Please note either Test Scenario 1 or 2 is mandatory to be performed as part of this validation. Test Scenario 3 is optional.</p>	
Notes	The application may receive a SecurityStatus (f) message in the event of a non-scheduled trading event	
Requirements		
#	Test Scenarios	Expected Results
1.	Application sends a TradingSessionStatusRequest (g) message defining the Market and/or Segment of interest and subscription type = Snapshot	The application should then receive a TradingSessionStatus (h) message which will be a Snapshot.
2.	Application sends a TradingSessionStatusRequest (g) message defining the Market and/or Segment of interest and subscription type = Snapshot + Updates.	The application should receive a TradingSessionStatus (h) message, which will be a Snapshot then Updates as the status changes.
3.	Application sends a TradingSessionStatusRequest (g) message defining the Market and/or Segment of interest and subscription type = Disable previous request.	The application will not receive a TradingSessionStatus (h) message. Updates will stop.



3.2.5 Market Data Request Snapshot Full Refresh

Category	Optional – For FIX Market Data applications only.	
Description	The purpose of this test is to ensure that the application can send in a Market Data Request to receive information related to equilibrium prices, imbalances, quotes, open, high, low, close, prior settlement, settlement, total traded volume, and VOI changes. This test will provide a one-off snapshot of the market.	
Notes		
Requirements		
#	Test Scenarios	Expected Results
1.	The application will send a MarketDataRequest (V) message with SubscriptionRequestType=Snapshot (263 = 0) and MDUpdateType=Full Refresh (265 = 0) to give a one-off complete snapshot of the book and its related statistics. Include at least three MDEntryType (269) values, including Bid and Offer.	The application should receive a MarketDataSnapshotFullRefresh (W). The snapshot will include active orders (bid and offer) to a set market depth and the market data values requested in the MDEntryType (269) values. No trades are returned in this Snapshot message.

3.2.6 Market Data Request – Incremental Refresh

Category	Optional – For FIX Market Data applications only.	
Description	<ul style="list-style-type: none"> • The purpose of this test is to ensure that the application can send a Market Data Request that will provide an incremental refresh of the market. • This test will provide a one-off snapshot of the market and incremental updates of any combination of new, changed, or deleted Market Data Entries for any combination of instruments. • This Market Data Request message must be sent with MDUpdateType=Incremental Refresh (265 = 1). 	
Notes		
Requirements		
#	Test Scenarios	Expected Results
1.	The application will send a MarketDataRequest (V) message with MDUpdateType=Incremental Refresh (265 = 1) to receive.	Participant receives a MarketDataIncrementalRefresh (X), where MDUpdateType=Incremental Refresh (265 = 1) contains the parameters requested from the MarketDataRequest (V) message.

3.2.7 Trade Capture Report Request

Category	Optional - For FIX Drop Copy applications	
Description	The purpose of this test is to ensure that Drop Copy applications can send through a request to receive all trade information for a specified trading day or for a specific contract for a specified trading day.	
Notes	If there is no trade information available from the specified day, a TradeCaptureReportRequestAck (AQ) message will be returned.	
Requirements	The test participant will need to ensure that at least one order was executed in the specified trading day on the contract being used for this test.	
#	Test Scenarios	Expected Results
1.	The application sends a TradeCaptureReportRequest (AD) message for a specific trading day requesting all trades TradeRequestType = All Trades (569=0).	A TradeCaptureReport (AE) message will be returned, which will contain information about all trade fills for the specified trading day.
2.	The application sends a TradeCaptureReportRequest (AD) message for a specific contract symbol, Symbol = APH7 (e.g., 55=APH7) and trading day requesting all trades, TradeRequestType = All Trades (569=0).	A TradeCaptureReport (AE) message will be returned, which will contain information about all trade fills for the specified contract symbol and trading day.

3.3 Order Types

3.3.1 Available Order Type Order Entry

Category	Mandatory if Market to Limit Orders are supported by FIX Order Entry applications	
Description	The purpose of this test is to ensure that the application can place either available order types, Limit and Market to Limit. Customers who have opted out of Market to Limit order type can omit this test; it is assumed that Limit orders will be used for the entirety of the test.	
Notes		
Requirements	FIX tags PartyId (448) where PartyRole (452) = 24 - Customer Account and FIX tag Account (1) are sent to the Clearing system for STP usage and should be sent on all NewOrderSingle(D) & OrderCancelReplaceRequest(G) messages as part of the conformance test.	
#	Test Scenarios	Expected Results
1.	The application will need to send a NewOrderSingle (D) message with order type: Limit.	Participants send an OrdType=Limit (40 = 2) and the order is acknowledged and entered in the market.
2.	The application will need to send a NewOrderSingle (D) message with order type: Market To Limit (MTL)	Participants send an OrdType=Market with left over as limit (40 = K) and the order is acknowledged and entered in the market.

3.4 Futures Order Management

3.4.1 Futures Order Entry

Category	Mandatory – For FIX Order Entry applications	
Description	The purpose of this test is to ensure that the application can successfully place a new order with a unique ClOrdID (11) in a future contract and receive a valid Execution Report from the exchange. For the purpose of this test the participant can pick either order type, and choose any outright future.	
Notes	Participant must have knowledge about Order type behaviours and limitations.	
Requirements	Customer is required to use a specific order book, using either the contract name (IRZ4) in Symbol (55) or order book id (147027) in SecurityID (48). FIX tags PartyId (448) where PartyRole (452) = 24 - Customer Account and FIX tag Account (1) are sent to the Clearing system for STP usage and should be sent on all NewOrderSingle(D) & OrderCancelReplaceRequest(G) messages as part of the conformance test.	
#	Test Scenarios	Expected Results
1.	The application will need to send a NewOrderSingle (D) message on the specific contract specified in Requirements using a Limit order type.	Confirmation of receipt of the order will be received in an ExecutionReport (8) containing the exchange order number OrderID (37), along with confirmation of all other relevant order details.

3.4.2 Futures Order Modification

Category	Mandatory – For FIX Order Entry applications*	
Description	<p>The purpose of this test is to ensure that the application can successfully modify the previously placed order with a new unique ClOrdID (11), referencing the OrderID (37) in the previously used future contract, and receive a valid Execution Report from the exchange.</p> <p>For the purpose of this test, the participant may modify either the Price (44) or OrderQty (38) used in the previous order.</p>	
Notes		
Requirements	<p>Customer is required to use a specific order book using either the contract name (IRZ4) in Symbol (55) or order book id (147027) in SecurityID (48). To complete this test scenario, an order will need to have been placed in the market by the FIX user who is connected for the Conformance test.</p> <p>FIX tags PartyId (448) where PartyRole (452) = 24 - Customer Account and FIX tag Account (1) are sent to the Clearing system for STP usage and should be sent on all NewOrderSingle(D) & OrderCancelReplaceRequest(G) messages as part of the conformance test.</p>	
#	Test Scenarios	Expected Results
1.	The application will need to send an OrderCancelReplaceRequest (G) message on the previously entered Limit order, modifying either the price or quantity.	An ExecutionReport (8) will be received containing the new values for OrderQty (38) or Price (44).

3.4.3 Futures Order Cancellation

Category	Mandatory – For FIX Order Entry applications	
Description	<p>The purpose of this test is to ensure that the application can successfully cancel the previously placed order, referencing the OrderID (37) in the previously used future contract, and receive a valid Execution Report from the exchange confirming that the order was cancelled.</p> <p>A cancel request must assign a new unique transaction id in the ClOrdID (11) field. If rejected/accepted, the ClOrdID (11) of the cancel request will be sent in the ClOrdID (11) field of the resulting Execution Report.</p>	
Notes		
Requirements	<p>Customer is required to use a specific order book, using either the contract name (IRZ4) in Symbol (55) or order book id (147027) in SecurityID (48).</p> <p>To complete this test scenario, an order will need to have been placed in the market by the FIX user who is connected for the Conformance test.</p>	
#	Test Scenarios	Expected Results
1.	The application will need to send an OrderCancelRequest (F) message on the previously entered/ modified order, which results in the order being cancelled and removed from the market.	An ExecutionReport (8) will be received, where ClOrdID (11) will have the new value sent in the OrderCancelRequest (F) message, and OrigClOrdID (41) will be populated by the original ClOrdID (11) value.



3.5 Option Order Management

3.5.1 Options Order Entry

Category	Mandatory – For FIX Order Entry applications	
Description	The purpose of this test is to ensure that the application can successfully place a new order with a unique ClOrdID (11) in an option contract and receive a valid Execution Report from the exchange. For the purpose of this test, the participant can pick either order type, and choose any outright option.	
Notes	Participants must have knowledge of Order type behaviours and limitations.	
Requirements	Customer is required to use a specific order book, using either the contract name (IRZ00100625C) in Symbol (55) or order book id (141647) in SecurityID (48). FIX tags PartyId (448) where PartyRole (452) = 24 - Customer Account and FIX tag Account (1) are sent to the Clearing system for STP usage and should be sent on all NewOrderSingle(D) & OrderCancelReplaceRequest(G) messages as part of the conformance test.	
#	Test Scenarios	Expected Results
1.	The application will need to send a NewOrderSingle (D) message on the specific contract specified in Requirements using a Limit order type.	Confirmation of receipt of the order will be received in an ExecutionReport (8) containing the exchange order number OrderID (37) along with confirmation of all other relevant order details.

3.5.2 Options Order Modification

Category	Mandatory – For FIX Order Entry applications
Description	The purpose of this test is to ensure that the application can successfully modify the previously placed order with a new unique ClOrdID (11), referencing the OrderID (37) in the previously used options contract, and receive a valid Execution Report from the exchange. For the purpose of this test, the participant may modify either the Price (44) or OrderQty (38) used in the previous order.
Notes	
Requirements	Customer is required to use a specific order book using either the contract name (IRZ00100625C) in Symbol (55) or order book id (141647) in SecurityID (48). To complete this test scenario, an order will need to have been placed in the market by the FIX user that is connected for the Conformance test. FIX tags PartyId (448) where PartyRole (452) = 24 - Customer Account and FIX tag Account (1) are sent to the Clearing system for STP usage and should be sent on all NewOrderSingle(D) & OrderCancelReplaceRequest(G) messages as part of the conformance test.

#	Test Scenarios	Expected Results
1.	The application will need to send an OrderCancelReplaceRequest (G) message on the previously entered order, modifying either the price or quantity.	An ExecutionReport (8) will be received containing the new values for OrderQty (38) or Price (44).



3.5.3 Option Order Cancellation

Category	Mandatory – For FIX Order Entry applications	
Description	<p>The purpose of this test is to ensure that the application can cancel the previously placed order, referencing the OrderID (37) in the previously used options contract, and receive a valid Execution Report from the exchange confirming the order was cancelled.</p> <p>A cancel request must assign a new unique transaction id in the ClOrdID (11) field. If rejected/accepted, the ClOrdID (11) of the cancel request will be sent in the ClOrdID (11) field of the resulting Execution Report.</p>	
Notes	<p>To maintain data integrity between the application and the exchange, the application should wait for the cancellation execution report(s) prior to removing orders from their trade book.</p> <p>*Please note order modification to OrderQty (38) = 0 is not an acceptable method for order cancellation.</p>	
Requirements	<p>Customer is required to use a specific order book using either the contract name (IRZ00100625C) in Symbol (55) or order book id (141647) in SecurityID (48).</p> <p>To complete this test scenario, an order will need to have been placed in the market by the FIX user that is connected for the Conformance test.</p>	
#	Test Scenarios	Expected Results
1.	The application will need to send an OrderCancelRequest (F) message on the previously entered/ modified order, which results in the order being cancelled and removed from the market.	An ExecutionReport (8) will be received, where ClOrdID (11) will have the new value sent in (F) message, and OrigClOrdID (41) will be populated by the original ClOrdID (11) value.



3.6 Spread Order Management

3.6.1 Spread Order Entry and Fill

Category	Mandatory – For FIX Order Entry applications supporting Spread Functionality	
Description	<ul style="list-style-type: none">The purpose of this test is to ensure that the application can successfully place an order in an inter-spread contract and receive a valid Execution Report from the Exchange.The participant may choose any spread and order type.	
Notes		
Requirements	Customer is required to use a specific order book using either the contract name (IRZ3Z4) in Symbol (55) or order book id (147044) in SecurityID (48). FIX tags PartyId (448) where PartyRole (452) = 24 - Customer Account and FIX tag Account (1) are sent to the Clearing system for STP usage and should be sent on all NewOrderSingle(D) & OrderCancelReplaceRequest(G) messages as part of the conformance test.	
#	Test Scenarios	Expected Results
1.	The application will need to send a NewOrderSingle (D) message on the specific contract specified in Requirements, using a Limit order type.	Confirmation of receipt of the order will be received in an ExecutionReport (8) containing the exchange order number OrderID (37) along with confirmation of all other relevant order details.

3.6.2 Spread Order Modification

Category	Mandatory – For FIX Order Entry applications	
Description	<p>The purpose of this test is to ensure that the application can successfully modify an initial spread order resting in the market and receive a valid execution report containing the amended parameters.</p> <p>This test ensures that the application can send a new ClOrdID (11) together with the existing Exchange Order OrderID (37). Modification of order types may or may not be allowed on some instruments, and the participant is expected to know the limitations of each order type and amendments.</p>	
Notes		
Requirements	<p>Customer is required to use a specific order book using either the contract name (IRZ3Z4) in Symbol (55) or order book id (147044) in SecurityID (48).</p> <p>To complete this test scenario, an order will need to have been placed in the market by the FIX user who is connected for the Conformance test.</p> <p>FIX tags PartyId (448) where PartyRole (452) = 24 - Customer Account and FIX tag Account (1) are sent to the Clearing system for STP usage and should be sent on all NewOrderSingle(D) & OrderCancelReplaceRequest(G) messages as part of the conformance test.</p>	
#	Test Scenarios	Expected Results
1.	The application will need to send an OrderCancelReplaceRequest (G) message on the previously entered order, modifying either the price or quantity.	An ExecutionReport (8) will be received containing the new values for OrderQty (38) or Price (44).



3.6.3 Spread Order Cancellation

Category	Mandatory – For FIX Order Entry applications
Description	<p>The purpose of this test is to ensure that the application can cancel an initial spread order that is resting in the market and receive an acknowledgment of cancellation details.</p> <p>A cancel request is assigned a unique transaction id in the ClOrdID field. If rejected/accepted, the ClOrdID of the cancel request will be sent in the ClOrdID field of the resulting execute report.</p>
Notes	<p>To maintain data integrity between the application and the exchange, the application should wait for the cancellation execution report(s) prior to removing orders from their trade book.</p> <p>*Please note order modification to OrderQty (38) = 0 is not an acceptable method for order cancellation.</p>
Requirements	<p>Customer is required to use a specific order book using either the contract name (IRZ3Z4) in Symbol (55) or order book id (147044) in SecurityID (48).</p> <p>To complete this test scenario, an order will need to have been placed in the market by the FIX user who is connected for the Conformance test.</p>

#	Test Scenarios	Expected Results
1.	The application will need to send an OrderCancelRequest (F) message on the previously entered/ modified order, which results in the order being cancelled and removed from the market.	An ExecutionReport (8) will be received where ClOrdID (11) will have the new value sent in the (F) message, and OrigClOrdID (41) will be populated by the original ClOrdID (11) value.



3.7 Shared Order Group Management

3.7.1 Shared Order Group Order Entry

Category	Mandatory – For FIX Order Entry applications that support Shared Order Group (SOG) functionality*	
Description	<p>The purpose of this test is to ensure that the application can place a new shared order with a unique ClOrdID (11) in a contract and receive a successful acknowledgment from the exchange.</p> <p>*For applications supporting SOG order entry script 3.7.3 (SOG Order Cancellation) is mandatory.</p>	
Notes	Please refer to the ASX Admin and Risk Terminal User Guide for information on how to setup shared order groups.	
Requirements	<p>To complete this test scenario, it is necessary to have two FIX Order Entry users who are part of an established SOG and can use either order type on any chosen contract.</p> <p>FIX tags PartyId (448) where PartyRole (452) = 24 - Customer Account and FIX tag Account (1) are sent to the Clearing system for STP usage and should be sent on all NewOrderSingle(D) & OrderCancelReplaceRequest(G) messages as part of the conformance test.</p>	
#	Test Scenarios	Expected Results
1.	The first FIX user sends two NewOrderSingle (D) messages on an open security of its choosing, using either a Limit order type with the appropriate PartyID (448).	<p>Confirmation of receipt of the order by all users in the shared order group will be received in an ExecutionReport (8) containing the OrderID (37) along with confirmation of all other relevant order details.</p> <p>To indicate that this is related to a shared order, the Execution report will populate PartyID (448), which identifies the SOG ID when accompanied with PartyRole = 76 (452 = 76).</p>



3.7.2 Shared Order Group Order Modification

Category	Mandatory – For FIX Order Entry applications that support Shared Order Group (SOG) modification	
Description	<p>The purpose of this test is to ensure that all members of a shared order group can modify the previously placed shared order with a new unique ClOrdID (11), referencing the OrderID (37) in the previously used contract, and receive a valid Execution Report from the exchange.</p> <p>This is a three part test and requires multiple users in the same SOG to complete successfully.</p>	
Notes		
Requirements	<p>To complete this test scenario, it is necessary to have two FIX Order Entry users who are part of an established SOG, who can use either order type on any chosen contract, and have completed the test scenario 3.7.1.</p> <p>FIX tags PartyId (448) where PartyRole (452) = 24 - Customer Account and FIX tag Account (1) are sent to the Clearing system for STP usage and should be sent on all NewOrderSingle(D) & OrderCancelReplaceRequest(G) messages as part of the conformance test.</p>	
#	Test Scenarios	Expected Results
1.	The FIX user that entered the order in test scenario 3.7.1 sends an OrderCancelReplaceRequest (G) message on the previously entered shared order, modifying either Price (44) or OrderQty (38) used in the previous order.	<p>An ExecutionReport (8) containing the new values for OrderQty (38) or Price (44) will be received by all SOG users.</p> <p>To indicate that this is related to a shared order, the Execution report will populate PartyID (448), which identifies the SOG ID when accompanied with PartyRole = Desk ID (452 = 76).</p>



#	Test Scenarios	Expected Results
2.	The second FIX user that is part of the SOG will now send a OrderCancelReplaceRequest (G) message on the previously entered shared order, modifying either Price (44) or OrderQty (38) used in the previous order	<p>An ExecutionReport (8) containing the new values for OrderQty (38) or Price (44) will be received by all shared order group users.</p> <p>To indicate that this is related to a shared order the Execution report will populate PartyID (448), which identifies the Shared Order Group ID when accompanied with PartyRole = Desk ID (452 = 76).</p>
3.	The first FIX user that originally entered the order sends an OrderCancelReplaceRequest (G) message on the previously entered shared order, modifying either Price (44) or OrderQty (38) used in the previous order above.	<p>An ExecutionReport (8) containing the new values for OrderQty (38) or Price (44) will be received by all shared order group users.</p> <p>To indicate that this is related to a shared order, the Execution report will populate PartyID (448), which identifies the Shared Order Group ID when accompanied with PartyRole = Desk ID (452 = 76).</p>

3.7.3 Shared Order Group Order Cancellation

Category	Mandatory – For FIX Order Entry applications that support Shared Order Group (SOG) functionality*
Description	<p>The purpose of this test is to ensure that the application can cancel the previously placed shared order, referencing the OrderID (37) in the previously used future contract, and receive a valid Execution Report from the exchange confirming the order was cancelled.</p> <p>A cancel request must assign a new unique transaction id in the ClOrdID (11) field. If rejected/accepted, the ClOrdID (11) of the cancel request will be sent in the ClOrdID (11) field of the resulting Execution Report.</p> <p>*This test is mandatory for all applications supporting SOG Order Entry.</p>
Notes	<p>To maintain data integrity between the application and the exchange, the application should wait for the cancellation execution report(s) prior to removing orders from their trade book.</p> <p>*Please note order modification to OrderQty (38) = 0 is not an acceptable method for order cancellation.</p>
Requirements	To complete this test scenario, it is necessary to have a second FIX Order Entry user who is part of an established Shared Order Group, which is different from the user that completed test scenario 3.7.1 .

#	Test Scenarios	Expected Results
1.	The first FIX user sends an OrderCancelRequest (F) message on one of the orders entered in test scenario 3.7.1 which results in the order being cancelled and removed from the market.	<p>An ExecutionReport (8) will be received on both FIX connections where ClOrdID (11) will have the new value sent in the OrderCancelRequest (F) message, and OrigClOrdID (41) will be populated by the original ClOrdID (11) value.</p> <p>To indicate that this is related to a shared order, the Execution report will populate PartyID (448), which identifies the Shared Order Group ID when accompanied with PartyRole(452) = Desk ID (452 = 76).</p>
2.	The second FIX user sends an OrderCancelRequest (F) message on one of the orders entered in test scenario 3.4.1, which results in the order being cancelled and removed from the market.	<p>An ExecutionReport (8) will be received on both FIX connections, where ClOrdID (11) will have the new value sent in the OrderCancelRequest (F) message, and OrigClOrdID (41) will be populated by the original ClOrdID (11) value.</p> <p>To indicate that this is related to a shared order, the Execution report will populate PartyID (448), which identifies the Shared Order Group ID when accompanied with PartyRole = Desk ID (452 = 76).</p>

3.8 Party Risk Limits Report

3.8.1 Party Risk Limits Report

Category	Mandatory – For FIX Order Entry applications	
Description	<p>The purpose of this test is to ensure the application can successfully manage the receipt of incremental warnings of pending trading limit breaches and also the initial rejection message once 100% of the set limit has been breached.</p> <p>Applications should demonstrate the ability to successfully receive and manage the rejection message and not continue to attempt re-entry of the breached order beyond three attempts.</p>	
Notes	Customer must have ASX Terminal access to set appropriate limits for this test.	
Requirements		
#	Test Scenarios	Expected Results
1.	<p>The application will need to send a NewOrderSingle (D) message on the contract with the recommended limits set, using a Limit order type.</p> <p>The order volume should equal 75% or greater of the volume limit set prior to this test.</p>	<p>A PartyRiskLimitsReport (CM) will be received with a RiskLimitType (1530) with a value of either 4 [Long limit] or 5 [Short limit], and a RiskLimitAction (1767) of 4 [Warning].</p> <p>RiskWarningLevelPercent (1560) = 75 in this scenario.</p>
2.	<p>The application will need to send a NewOrderSingle (D) message on the contract with the recommended limits set, using a Limit and a Market to Limit order type.</p> <p>The order volume should equal 90% or greater of the volume limit set prior to this test.</p>	<p>A PartyRiskLimitsReport (CM) will be received with a RiskLimitType (1530) with a value of either 4 [Long limit] or 5 [Short limit], and a RiskLimitAction (1767) of 4 [Warning].</p> <p>RiskWarningLevelPercent (1560) = 90 in this scenario.</p>

#	Test Scenarios	Expected Results
3.	<p>The application will need to send a NewOrderSingle (D) message on the contract with the recommended limits set, using a Limit and a Market to Limit order type.</p> <p>The order volume should be greater than 100% of the volume limit set prior to this test.</p>	<p>An ExecutionReport (8) will be received with OrdRejReason (103) value of 3 [order exceeds limit (PTRM limit exceeded)].</p>

3.9 User Defined Combination (UDC) Management

3.9.1 User Defined Combination (UDC) Creation

Category	Optional – For FIX Order Entry applications*	
Description	<p>The purpose of this test is to ensure that the application can generate a new UDC in an open market as verification.</p> <p>The User Defined Combination allows traders to enter strategy orders of up to six legs with any combination of futures and options contracts. The User Defined Combination facilitates the entry of complex options and futures strategies (that is, straddles, strangles, call/put spreads, strips, butterflies, etc.).</p>	
Notes		
Requirements		
#	Test Scenarios	Expected Results
1.	The application will need to send a SecurityDefinitionRequest (c) message on a set of open securities of its choosing, where NoLegs (555) has a value between 2 and 6.	<p>A SecurityDefinition (d) message will be returned, where SecurityResponseType (323) will identify if the UDC creation was accepted or rejected and provide the UDC symbol information in Tags Symbol (55), SecurityId (48), and SecuritySourceID (22).</p> <p>*The UDC definition will be published in a SecurityList(y) message in FIX Market Data. FIX Market Data users subscribing to these messages are encouraged to confirm receipt of the update at this stage of the test.</p>

3.9.2 User Defined Combination (UDC) Order Entry and Fill

Category	Mandatory – For FIX Order Entry applications	
Description	<p>The purpose of this test is to ensure that the application can place a new order with a unique ClOrdID (11) in a UDC and receive a valid Execution Report from the exchange.</p> <p>For the purpose of this test, the participant may use either order type.</p>	
Notes		
Requirements	<p>The FIX user taking part in the Conformance test will need to create an order in a UDC that has been generated either by itself or another FIX user. FIX tags PartyId (448) where PartyRole (452) = 24 - Customer Account and FIX tag Account (1) are sent to the Clearing system for STP usage and should be sent on all NewOrderSingle(D) & OrderCancelReplaceRequest(G) messages as part of the conformance test.</p>	
#	Test Scenarios	Expected Results
1.	The application will need to send a NewOrderSingle (D) message on an open UDC, using either a Limit or Market to Limit order type.	Confirmation of receipt of the order will be received in an ExecutionReport (8) containing the exchange order number OrderID (37) and confirmation of all other relevant order details.
2.	The application will need to send an opposing side NewOrderSingle (D) message to cross the resting order placed previously in 1.	Confirmation of receipt of the order will be received in an ExecutionReport (8) containing the exchange order number OrderID (37) along with respective ExecutionReport (8) messages detailing the fills. Expected count of 2 Fill messages received by the application.



3.9.3 User Defined Combination (UDC) Order Modification

Category	Mandatory – For FIX Order Entry applications	
Description	<p>The purpose of this test is to ensure that the application can modify the previously placed order with a new unique ClOrdID (11), referencing the OrderID (37) in the previously used UDC, and receive a valid Execution Report from the exchange.</p> <p>For the purpose of this test, the participant may modify either the Price (44) or OrderQty (38) used in the previous order</p>	
Notes		
Requirements	<p>To complete this test scenario, an order will need to have been placed in the UDC by the FIX user who is connected for the Conformance test.</p> <p>FIX tags PartyId (448) where PartyRole (452) = 24 - Customer Account and FIX tag Account (1) are sent to the Clearing system for STP usage and should be sent on all NewOrderSingle(D) & OrderCancelReplaceRequest(G) messages as part of the conformance test.</p>	
#	Test Scenarios	Expected Results
1.	The application will need to send an OrderCancelReplaceRequest (G) message on the previously entered order, modifying either the price or quantity.	An ExecutionReport (8) will be received containing the new values for OrderQty (38) or Price (44).

3.9.4 User Defined Combination (UDC) Order Cancellation

Category	Mandatory – For FIX Order Entry applications	
Description	<p>The purpose of this test is to ensure that the application can cancel the previously placed order, referencing the OrderID (37) in the previously used UDC, and receive a valid Execution Report from the exchange confirming the order was cancelled.</p> <p>A cancel request must assign a new unique transaction id in the ClOrdID (11) field. If rejected/accepted, the ClOrdID (11) of the cancel request will be sent in the ClOrdID (11) field of the resulting Execution Report.</p>	
Notes	<p>To maintain data integrity between the application and the exchange, the application should wait for the cancellation execution report(s) prior to removing orders from their trade book.</p> <p>*Please note, order modification to OrderQty (38) = 0 is not an acceptable method for order cancellation.</p>	
Requirements	To complete this test scenario, an order will need to have been placed in the UDC by the FIX user who is connected for the Conformance test.	
#	Test Scenarios	Expected Results
1.	The application will need to send an OrderCancelRequest (F) message on the previously entered/ modified order which results in the order being cancelled and removed from the market.	An ExecutionReport (8) will be received, where ClOrdID (11) will have the new value sent in the (F) message, and OrigClOrdID (41) will be populated by the original ClOrdID (11) value.

3.10 Mass Order Status and Cancellation

3.10.1 Mass Status Request

Category	Mandatory – For FIX Order Entry applications	
Description	The purpose of this test is to confirm that the application can send an OrderMassStatusRequest (AF) message. The requests are for status of orders matching the criteria specified within the message. The application must specify whether it was to receive the status of orders of specified securities, or all active orders using MassStatusReqType (585). For each order, an ExecutionReport (8) message will be sent to notify the status of the order.	
Notes		
Requirements	To complete this test scenario, multiple orders will need to have been placed in the market by either the FIX user who is connected for the Conformance test, or another who is part of the same Shared Order Group.	
#	Test Scenarios	Expected Results
1.	The application will need to send an OrderMassStatusRequest (AF) message.	Multiple ExecutionReport (8) messages can be received, depending on what the OrderMassStatusRequest (AF) message has specified.

3.10.2 Order Mass Cancellation

Category	Mandatory – For FIX Order Entry applications
Description	<p>The purpose of this test is to ensure that the application can cancel previously placed orders and receives ExecutionReport (8) messages from the exchange confirming the cancellation of orders.</p> <p>An OrderMassCancelRequest (q) will be acknowledged by an OrderMassCancelReport(r). Each cancelled order will be acknowledged by an ExecutionReport (8).</p>
Notes	This message is used to cancel all orders for a FIX connection. Where MassCancelRequestType (530) is 7 only 1 message should be sent per FIX session.
Requirements	To complete this test scenario multiple orders will need to have been placed in the market by the FIX user who is connected for the Conformance test.

#	Test Scenarios	Expected Results
1.	The application will need to send an OrderMassCancelRequest (q) message, which results in the orders being cancelled and removed from the market.	<p>A OrderMassCancelReport (r) will be received together with MassActionReportID (1369), which is the unique identifier for the OrderMassCancelReport (r) assigned by the recipient of the OrderMassCancelRequest (q).</p> <p>All orders entered by the nominated FIX session will be cancelled.</p>



3.10.3 Order Mass Cancellation – Cancelling with SOG

Category	Mandatory – For FIX Order Entry applications that support Shared Order Group (SOG) functionality
Description	<p>The purpose of this test is to ensure that the application can cancel previously placed orders, referencing the Shared Order Group ID and receives ExecutionReport(8) messages confirming the cancellation of orders.</p> <p>An OrderMassCancelRequest (q) will be acknowledged by an OrderMassCancelReport(r). Each cancelled order will be acknowledged by an ExecutionReport (8).</p>
Notes	This message is used to cancel all orders marked with a given Shared Order Group and all orders entered by the FIX connection issuing the cancellation. Where MassCancelRequestType (530) is 7 only 1 message should be sent for 1 SOG identifier
Requirements	This scenario requires 2 FIX order entry users, both members of the SOGs used. Both place three types of orders to rest in the market: No Shared Order Group specified, Shared Order Group 1 specified, Shared Order Group 2 specified.

#	Test Scenarios	Expected Results
1.	The application will need to send an OrderMassCancelRequest (q) message specifying the unique SOG identifier for orders to be cancelled.	<p>A OrderMassCancelReport (r) will be received together with MassActionReportID (1369), which is the unique identifier for the OrderMassCancelReport (r) assigned by the recipient of the OrderMassCancelRequest (q).</p> <p>The following orders will be cancelled: All orders tagged with the SOG identifier, all orders entered by the user issuing the mass cancellation. All other orders entered by the second user remain in the market.</p>



3.10.4 Order Mass Cancellation – Cancelling with onBehalfOfCompld (115)

Category	Optional – For FIX Order Entry applications
Description	<p>The purpose of this test is to ensure that the application can cancel previously placed orders, the owner of the order will receive a valid ExecutionReport(8)) messages confirming the cancellation of orders.</p> <p>An OrderMassCancelRequest (q) will be acknowledged by an OrderMassCancelReport(r). Each cancelled order will be acknowledged by an ExecutionReport (8).</p>
Notes	This message is used to cancel all orders for a specific FIX connection. Where MassCancelRequestType (530) is 7 only 1 message should be sent per user identifier onBehalfOfCompld (115)
Requirements	This scenario requires 2 FIX order entry users. Both place orders to rest in the market.

#	Test Scenarios	Expected Results
1.	The application will need to send an OrderMassCancelRequest (q) message on the previously entered orders, which results in the orders being cancelled and removed from the market. The FIX client will specify the unique user identifier for orders to be cancelled on behalf of.	<p>A OrderMassCancelReport (r) will be received together with MassActionReportID (1369), which is the unique identifier for the OrderMassCancelReport (r) assigned by the recipient of the OrderMassCancelRequest (q).</p> <p>Orders for the nominated on behalf of user will be cancelled and the on behalf user receives Execution Report (8) messages, but not the user issuing the cancellation.</p> <p>Orders entered by the cancelling user remain in the market.</p>



3.11 Cancel on Disconnect

3.11.1 Cancel on Connection loss

Category	Optional – For FIX Order Entry applications	
Description	The purpose of this test is to ensure that the application can enter orders set to cancel themselves in the event of the application being disconnected from the environment. The application should then be able to handle the receipt of the execution reports when reconnected.	
Notes		
Requirements		
#	Test Scenarios	Expected Results
1.	The application will need to send four separate NewOrderSingle (D) messages, where three of the new orders set ExecInst = Cancel on connection loss (18 = o).	An ExecutionReport (8) will be received where ClOrdID (11) will have the new value sent in either the (G) or (F) message, and OrigClOrdID (41) will be populated by the original ClOrdID (11) value.
2.	The application logs out, waits for a period of 30 seconds, and reconnects to the system with a valid Logon(35=A) and using a valid recovery mechanism. See FIX Order Entry manual for more details on recovery.	The application will receive three ExecutionReport (8) messages, where OrdStatus = Cancelled (39 = 4)

3.12 Quote Request

3.12.1 RFQ Request

Category	Optional – For FIX Market Data applications	
Description	The purpose of this test is to ensure that the application can correctly subscribe to RFQ messages submitted by their firm or other Market Participants.	
Notes		
Requirements		
#	Test Scenarios	Expected Results
1.	The application sends in an RFQRequest (AH) message for the specific contract which is being monitored.	Any QuoteRequest (R) messages sent on the specified contract will be received.

3.12.2 Quote Request

Category	Optional – For FIX Order Entry applications	
Description	The purpose of this test is to ensure that the application can send a Quote Request on any instrument of interest.	
Notes		
Requirements		
#	Test Scenarios	Expected Results
1.	The application will send a QuoteRequest (R) message.	A MarketDataIncrementalRefresh (X) will be received, if another market participant decides to respond to the Quote Request.

3.13 Unintentional Crossing Prevention (UCP)

3.13.1 UCP On Order Entry

Category	Optional - For FIX Order Entry applications	
Description	The purpose of this test is to ensure that the application can assign a UCP key to order messages and handle the respective UCP trades where these orders cross on market.	
Notes		
Requirements	FIX tags NoMatchInst (1624), MatchInst (1625), MatchAttribTagID (1626) and MatchAttribValue (1627) sent on NewOrderSingle(D) message.	
#	Test Scenarios	Expected Results
1.	The application will need to send a NewOrderSingle (D) message with order type: Limit and a valid MatchAttribValue (1627).	Order is acknowledged and entered in the market.
2.	The application will need to send a second NewOrderSingle (D) message with order type: Limit, opposing side and a matching MatchAttribValue (1627).	Order is acknowledged and executes against the previous resting order. An ExecutionReport (8) will be received with MatchInst(1625) = 1

3.14 ASX Market Data Protocol

3.14.1 ASX Market Data Protocol Gap Request – Blink

Category	Mandatory - For ASX Market Data Protocol applications	
Description	The purpose of this test is to ensure that the application can send a Market Data gap Request (Blink), which will provide an incremental refresh of the market.	
Notes	ASX pauses the multicast feed to generate a gap in the ASX Market Data Protocol feed in CDE on the hour, between 10am and 4pm daily. Customers should use these opportunities to test their Blink function.	
Requirements		
#	Test Scenarios	Expected Results
3.	Send a Blink request specifying the sequence number of the first message to re-transmit and the number of messages to be resent.	The Blink server will respond with the requested sequence messages as defined in the ASX Market Data Protocol Specification.

3.14.2 ASX Market Data Protocol Snapshot – Glance

Category	Mandatory - For ASX Market Data Protocol applications	
Description	The purpose of this test is to ensure that the application can use the Glance service to receive a data snapshot of the market.	
Notes		
Requirements		
#	Test Scenarios	Expected Results
1.	The client application makes a connection to the Glance IP/port and establishes a TCP/IP connection. The application sends a Login Request Packet "L".	The Glance service sends a Login Accepted Packet to client connection, then immediately sends a snapshot – this is the current market data picture.

3.14.3 ASX Market Data Protocol - Password Change

Category	Mandatory - For ASX Market Data Protocol applications	
Description	The purpose of this test is to ensure that the application can perform a password change as part of a logon to the environment to demonstrate to ASX that the application can manage its own password in day to day operations	
Notes	<ul style="list-style-type: none">NTP application passwords expire every 90 days, and must be changed by the application prior to this or it will not be able to login to the Exchange.	
Requirements	Applications must adhere to the ASX Password policy, outlined in the ASX Market Data Protocol Specification – Password Change Request Packet.	
#	Test Scenarios	Expected Results
1.	Establish a connection and send a Password Change Request Packet “W” to the exchange.	Participant sends a Packet Type Set to “W” specifying a New Password, which matches the ASX password policy. ASX will respond with a Password Change Response Packet with Status = 3001 (Password successfully changed)



4. ASX Assisted Tests

This phase of the Conformance test process is allocated for one to one testing between the application developer and an ASX test specialist. These scenarios will be tested in a controlled manner with both sides on the phone confirming each test in turn independently.

This session should only be booked with ASX when the “Self-testing” phase is successfully completed.



4.1 Password Expiry

Category	Mandatory - For FIX Drop Copy, FIX Order Entry and FIX Market Data applications	
Description	<p>The purpose of this test is ensure an application can correctly manage an account that has reached its password expiry date.</p> <p>The participant will receive an error message upon login, relating to an account that requires a change in password, simulating a scenario of an expired login.</p> <p>This test will force the account to an expired state and the application should be able to re-establish connectivity and provide a new logon password thereafter.</p> <p>It is expected that the application will refrain from any further connection attempts if it's unable to provide a valid logon message after the password expires.</p>	
Notes		
Requirements		
#	Test Scenarios	Expected Results
1.	The application will perform a standard Logout (5). ASX will then set a new password which will be configured to expire immediately, and advise the customer what the new password is.	The participant will receive a Logout (5) confirmation.
2.	The application will then send a Logon (A) message using the new password provided by ASX in Password (554)	The application will receive a Logout (5) from the exchange where the SessionStatus = Password expired (1409 = 8) and its connection will be terminated by the exchange.
3.	The application will then need to send a Logon (A) message, where it sends a valid NewPassword (925) value.	The application will maintain its connection to the exchange.



4.2 News and Text Messages

Category	Mandatory for all ASX protocols	
Description	<p>The purpose of this test is to confirm if the participant can receive and process News messages as sent by the ASX.</p> <p>Throughout the trading session, ASX may send messages to inform the market of pricing corrections, approvals of block trades, and other information that may be relevant to the market participants.</p> <p>The participant should receive these messages with their Order Entry and/or Market Data connections.</p>	
Notes	<ul style="list-style-type: none"> ASX Market Data Protocol = Text (x). As per ASX market data protocol specification (max characters = 100). FIX = News (B) MsgType = B. As per ASX FIX Specification. 	
Requirements		
#	Test Scenarios	Expected Results
1.	ASX will enter a text message and send it to the entire market.	Participant receives a News (B) and provides corresponding details to the ASX.

4.3 Intraday Contract Maintenance

Category	Mandatory for all FIX Market Data Applications	
Description	<p>The purpose of this test is to check if the participant can receive intra-day updates of newly listed instruments.</p> <p>The ASX can list new Future and Options and perform strike extensions intra-day.</p> <p>Newly listed instruments are sent via the SecurityList (y) message and the participant must have subscribed to SecurityListRequest (x) to cover the listing.</p>	
Notes		
Requirements	The application will need to have subscribed for intraday updates via the SecurityListRequest (x) prior to the test.	
#	Test Scenarios	Expected Results
1.	ASX will either generate or amend an instrument in the market.	Participant receives a SecurityList (y) that contains the description of the listed instrument.

4.4 Message Reject Handling

Category	Mandatory - For FIX Order Entry applications	
Description	Customer applications should be able to handle receipt of reject messages. Customer applications should be able to pass each of these scenarios. However, the exchange will accept a minimum of any 3 of the 5 scenarios below.	
Notes	Scenario 1 results in a BusinessMessageReject (j), 2 & 3 result in a Reject (3), and 4 & 5 result in an ExecutionReport (8).	
Requirements		
#	Test Scenarios	Expected Results
1.	<p>Invalid Message Type:</p> <p>The application will need to trigger a BusinessMessageReject, e.g., Send an invalid message for the FIX session, sending a MarketDataRequest(V) message over a FIX Order Entry Session.</p>	A BusinessMessageReject (j) will be received with a BusinessRejectReason (380) with a value of either 0 [Other] or 3 [Unsupported Message Type]. The details of the rejection are contained in Text (58), where 380 = 0.
2.	<p>Invalid Price:</p> <p>The application will need to send a NewOrderSingle (D) message on an open contract, using either a Limit or Market to Limit order type.</p> <p>Price (44) should reflect any or all of the following:</p> <ul style="list-style-type: none"> • Special characters (?%&) 	A Reject (3) will be received with a SessionRejectReason (373) with a value of 6 [Incorrect data format value]. The details of the rejection are contained in Text (58).
3.	<p>Invalid Quantity:</p> <p>The application will need to send a NewOrderSingle (D) message on an open contract, using either a Limit or Market to Limit order type.</p> <p>OrderQty (38) should reflect any or all of the following:</p> <ul style="list-style-type: none"> • Special characters (?%&) 	A Reject (3) will be received with a SessionRejectReason (373) with a value of 6 [Incorrect data format value]. The details of the rejection are contained in Text (58).



#	Test Scenarios	Expected Results
4.	<p>Invalid Instrument:</p> <p>The application will need to send a NewOrderSingle (D) message on an open contract, using either a Limit or Market to Limit order type.</p> <p>Symbol (55) or SecurityID (48) should reflect any or all of the following:</p> <ul style="list-style-type: none"> Invalid 'human understood' security details for (55) <p>Invalid security identifier value as per SecurityIDSource (22) for (48)</p>	<p>An ExecutionReport (8) will be received with 39=8 [Rejected]. The details of the rejection are contained in Text (58)</p>
5.	<p>Invalid Account:</p> <p>The application will need to send a NewOrderSingle (D) message on an open contract, using either a Limit or Market to Limit order type.</p> <p>Account (1) should reflect any or all of the following:</p> <p>Numeric characters and special characters.</p>	<p>An ExecutionReport (8) will be received with 39=8 [Rejected]. The details of the rejection are contained in Text (58)</p>

4.5 Unsolicited Amend & Cancel

Category	Mandatory – For Order Entry Applications	
Description	The purpose of this test is to ensure that the application can manage the receipt of unsolicited amend and cancel messages when other applications take action on orders it has placed or managed. E.g. an ASX Trading Terminal Super User performing an order action on a FIX User's order.	
Notes	<p>*The expectation for this test is that customers use the Trading terminal Super User to amend and cancel the order as placed by the application.</p> <p>CTS can assist for those without Trading Terminal access</p> <p>**Please note, ASX would not under any circumstances perform an amendment of a customer order in the Production Environment.</p>	
Requirements	The Application FIX Order Entry User will need to be part of the same Shared Order Group as the ASX Trading Terminal Super User	
#	Test Scenarios	Expected Results
1.	The application will need to send two separate NewOrderSingle (D) messages on contracts of its choice. The first order will need to supply a valid Shared Order Group populating PartyID (448), which identifies the SOG ID when accompanied with PartyRole = Desk ID (452 = 76).	An ExecutionReport (8) will be received, where ClOrdID (11) will have the new value sent in either the (G) or (F) message, and OrigClOrdID (41) will be populated by the original ClOrdID (11) value.
2.	Customer Super User*/ASX** will amend either the Price (44) or OrderQty (38) of the first order that was placed.	The application will receive a ExecutionReport (8) messages, where ExecType = Replaced (150 = 5)
3.	Customer Super User*/ASX will send an OrderCancelRequest (F) message on the second order that was placed.	The application will receive a ExecutionReport (8) messages, where ExecType = Cancelled (150 = 4)



4.6 Implied Prices on Spreads

Category	Optional – For FIX Market Data Applications	
Description	<p>The purpose of this test is to ensure that the application can receive implied prices.</p> <p>An Implied IN price is a spread price generated from two outright prices, implied or otherwise, in different contract months.</p> <p>An Implied OUT price is an outright price in one contract month generated from an outright price, implied or otherwise in a different contract month, and a spread price, implied or otherwise, between the two contract months.</p> <p>The participant must subscribe to market data and distinguish implied prices from outright orders in both spread and outright markets</p>	
Notes	<ul style="list-style-type: none"> • If you are able to create an implied market using your FIX Order Entry order management connection or ASX Trading Terminal, please inform CTS once finished, so they can verify this test. • If you do not have Order Entry capabilities, a Self-test is not available. Participants must organise with ASX to assist with testing to create a market suitable for the test. 	
Requirements	Participant must subscribe to Market Data	
#	Test Scenarios	Expected Results
1.	ASX enters prices on the outright market on a contract as agreed with the participant.	The participant will receive either a MarketDataSnapshotFullRefresh (W) or MarketDataIncrementalRefresh (X) with a QuoteCondition (276) that indicates Implied Order or Price.

4.7 Market Data Validation

Category	Mandatory – For Market Data Applications	
Description	The purpose of this test is to ensure that the application can correctly receive market data updates.	
Notes		
Requirements	Participant must subscribe to Market Data	
#	Test Scenarios	Expected Results
1.	<ul style="list-style-type: none"> a. ASX enters orders on the outright market on a contract as agreed with the participant. b. ASX to then trade existing order and question the participant on the current price and volume of the order. 	<ul style="list-style-type: none"> a. The participant will need to confirm the price and size of the orders as received by their feed. b. Participant to answer what volume is left on the order and confirm the order state. Participant to confirm Total volume traded for contract

4.8 Trade Cancellation

Category	Mandatory – For FIX Order Entry Applications	
Description	The purpose of this test is to ensure that the application can receive a Trade Cancellation message from the Trading Platform. Trade cancellations initiated by the ASX will result in the application receiving an unsolicited ExecutionReport(8) containing details of the Trade cancel	
Notes		
Requirements		
#	Test Scenarios	Expected Results
1.	The Application enters a Limit Buy NewOrderSingle(D) message for an outright contract of their choosing, e.g., IBH7. CTS will execute against your order to generate a Trade that will either partially or fully fill the order. CTS will then cancel your Trade.	The Participant will receive an ExecutionReport(8) with ExecType(150=H) once the Trade has been cancelled.
2.	The Application Enters a Limit Buy NewOrderSingle(D) message for a spread contract of their choosing, e.g., IBF7H7. CTS will execute against your order to generate a Spread Trade and Leg Trade that will either partially or fully fill the order. CTS will then cancel one of the Leg Trades.	The Participant will receive an ExecutionReport(8) with ExecType(150=H) once the Leg Trade has been cancelled.



4.9 Account Disabled

Category	Mandatory – For all FIX Applications	
Description	The purpose of this test is to ensure that the application does not attempt multiple Login retry attempts once their Account is disabled.	
Notes	Please refer to the exchange guidelines on logon retry behaviour in the NTP Failover and Recovery guide	
Requirements		
#	Test Scenarios	Expected Results
1.	The Application will perform a Logon (35=A) CTS will disable the Account which subsequently will Logout(35=5) the Account and disconnect the session The Application will perform another Logon (35=A)	The Participant will receive a Logout (35=5) message with Account Locked(1409=6). The Application is observed not attempting multiple Logon(35=A) retry attempts once their Account is locked.

5. Recovery

ASX facilitates a failover of the exchange FIX gateways at 3pm every Friday. Customers are expected to demonstrate the ability of their application to successfully failover and recover, per the test case below. Sign-off of successful conformance testing is contingent on this test case.

Customers should allow for this timing when planning roll out of a newly conformed application. ASX reserves the right to withhold sign-off, pending successful completion of this test case.



5.1 Server Failover

Category	Mandatory – For FIX Order Entry and FIX Drop Copy applications
Description	<p>The purpose of this section is to test if the participant’s Order Entry or Drop Copy accounts can recover from the failover which occurs at 3:00pm (Fridays only) and re-establish a session when connectivity is available.</p> <p>When reconnecting, the participant should login again to the session using the next transmitted sequence numbers.</p>
Notes	<p>Each FIX client must maintain the address and port for the primary and the standby ASX FIX server. If a server cannot be reached, we recommend performing the following steps</p> <ul style="list-style-type: none">• Attempt to connect to the other server (standby if primary attempted, and primary if standby attempted)• Wait five seconds, and then try to connect to the server again.• Please refer to the Failover and Recovery guide on the ASX Website for further detail.
Requirements	<p>Each FIX client must maintain the address and port for the primary and the standby ASX FIX server. If a server cannot be reached, we recommend performing the following steps:</p> <ul style="list-style-type: none">• Attempt to connect to the other server (standby if primary attempted and primary if standby attempted)• Wait five seconds, and then try to connect to the server again.• On completion of test please contact CTS for final confirmation of conformance passed.

#	Test Scenarios	Expected Results
1.	ASX terminates the applications FIX sessions at 3:00pm.	
2.	The application can try to re-connect immediately as per the FIX Order Entry/Drop Copy Specification guidelines with a Logon (A) message, populating NextExpectedMsgSeqNum (789) with the next expected sequence number to be sent by the ASX.	<p>ASX will respond with a Logon(35=A) message populating NextExpectedMsgSeqNum (789) with the next expected sequence number to be sent by the Customer application, it is expected that ASX and the Customer application will then automatically resend missed messages before sending any other messages, heartbeats, TestRequests etc.</p> <p>On Logon (35=A) if NextExpectedMsgSeqNum (789=1) ASX will be viewed as a failure, the application must logon with the NextExpectedMsgSeqNum(789) to be received from the exchange.</p>

6. Version History

This document has been revised according to the table below:

Version	Date	Comment
V1.4	July 2016	Final release of Conformance Test
V1.5	August 2017	Added optional UCP test



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