



**ASIC**

Australian Securities & Investments Commission

# Australian Market Regulation Feed

## FIX Certification Manual

**Author:** Kris Crnmarkovic

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## Document Control

This document is a version-controlled document. All changes are recorded in the following version control table.

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## 1. About this Document

### 1.1 Introduction

ASIC (Australian Securities and Investments Commission) is Australia's corporate, markets and financial services regulator.

ASIC contributes to Australia's economic reputation and wellbeing by ensuring that Australia's financial markets are fair and transparent, supported by confident and informed investors and consumers.

ASIC is an independent Commonwealth Government body, is set up under and administers the Australian Securities and Investments Commission Act (ASIC Act), and carries out most of its work under the Corporations Act.

The Australian Securities and Investments Commission Act 2001 requires ASIC to:

- maintain, facilitate and improve the performance of the financial system and entities in it
- promote confident and informed participation by investors and consumers in the financial system
- administer the law effectively and with minimal procedural requirements
- enforce and give effect to the law
- receive, process and store, efficiently and quickly, information that is given to us
- make information about companies and other bodies available to the public as soon as practicable.

ASIC has taken over responsibility for supervision of real-time trading on Australia's domestic licensed markets. This supplements its existing responsibility for enforcement of the laws against misconduct on Australia's financial markets and its supervision of Australian financial services licence holders.

To facilitate the monitoring of trading activity, each equity market is required to establish a network connection into ASIC's market surveillance system, and during the course of each trading day, provide a parallel data feed consisting of all orders, trades, and quotes being processed and disseminated by the market's trading engine, as well as all trading session and security price and status related messages.

### 1.2 Intended Audience

This document has been specifically written for Australian equity markets exchanges who intend to provide the requisite order, and trade information to ASIC's Market Surveillance System (IMSS) using FIX, and the operator of the ASIC Integrated Market Surveillance System (IMSS) platform. This specification document will be of particular interest to business analysts, systems architects, and developers. It may also be useful to market participants who choose to implement the ASIC Market Regulation Feed – FIX Specification.

### 1.3 References

- Australian Market Regulation Feed – FIX Specification
- Australian Market Regulation Feed – FIX Message Sequence Guide
- Australian Market Regulation Feed – Rules of Engagement

## 2. Certification Summary

### 2.1 Overview

This document outlines the certification process for the Australian Market Regulation Feed. The certification tests cover a range of functional elements and message scenarios to ensure the market can successfully connect to the ASIC FIX gateway, and reliably provide the required messages in accordance with the Australian Market Regulation Feed – FIX Specification and Message Sequence Guide.

There are two phases to the certification process. The certification phases are defined as follows:

**Certification Phase I:** This phase of certification involves the provision of Session and Application-level messages according to a test script that is provided by ASIC.

**Certification Phase II:** This phase of certification involves the connection and transmission of real-time, production / production-quality data into the ASIC IMSS platform test environment.

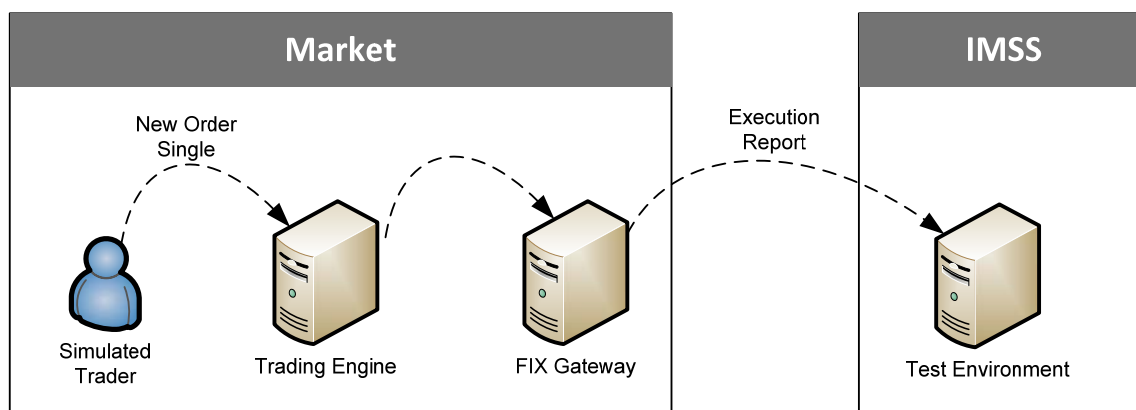
## 3. Phase One Certification

### 3.1 Summary

Phase One Certification involves basic connectivity testing followed by a standard FIX certification process. ASIC will provide the market with a master suite of test cases for both session and application level messages. Prior to the start of testing, the market will be asked to identify which application messages are relevant to their market structure. Additional cases can also be added to accommodate specific order types not covered in the master list of test cases. Upon receipt of this information, ASIC will then create and distribute a customized test case suite to the market. Between five and ten business days are allotted for this phase of testing.

During Phase One certification, the market is expected to simulate broker order flow into its trading engine according to the certification test cases. The application messages sent to the ASIC test environment during certification should be the end result of orders being entered (and matched, replaced, cancelled) and processed by the market's simulated trading engine. The market regulation feed application messages should not be synthetically composed and then sent directly to ASIC. (See Figure 1: Application Message Flow during Certification.)

Figure 1: Application Message Flow during Certification



While session-level test cases require interaction between IMSS and Market staff during execution, the preferred method for executing the application message test cases is for the market to create a test script. To assist in the validation process the market is requested to provide the TestCaseID within each Execution and Trade Capture Report message within the Account (1) field. Alternatively, the market can assign a specific security for each test case and provide a reference table to ASIC prior to testing.

The table below summarizes the description and purpose of each task of Phase One Certification:

Table 1: Phase One Certification

| Task                       | Description   | Purpose   |
|----------------------------|---|---|
| Basic Connectivity         | Telnet test   | To verify basic connectivity  |
| Session Level Messages     | The execution of a number of predetermined session level test cases   | <p>To verify the market can successfully connect as the initiator to the ASIC FIX Gateway</p> <p>To verify the market can initiate and respond to standard session level messages (i.e., test requests, resend requests, etc.)</p> <p>To verify the market can successfully reconnect after an ASIC or market initiated disconnect</p>  |
| Application Level Messages | The execution of a number of predetermined application level messages | <p>To verify basic structure and syntax of application-level messages</p> <p>To verify mandatory fields are populated</p> <p>To verify regulatory flags are correctly populated</p> <p>To verify basic message sequencing for specific order / trade scenarios</p> <p>To verify Start-of-Day and End-of-Day messages are correctly structured and sent in the proper sequence</p> |

## 3.2 Validation and Feedback

During Phase One Certification, ASIC uses a combination of manual and automated processes to validate inbound messages and provide feedback to the market.

During Phase One testing ASIC IMSS QA staff will review log files and provide feedback to the market as quickly as possible. The ASIC IMSS QA staff will work with the market to schedule the initial testing date and time, and will work with the market to re-schedule tests for cases that failed validation.

To help expedite certification, the ASIC FIX Gateway also performs a validation function by checking inbound messages for basic syntactical and rule violations (e.g., mandatory field not populated, invalid timestamp granularity, invalid market identifier, etc.). In the event an error is detected by the validation module, the gateway will generate an outbound Reject message with an explanation in the Text (58) field for why the message failed validation.

(See Figure 2: Sample Reject Message).

Figure 2: Sample Reject Message

Market sends an Execution Report for a new order with Tag 38 (OrderQty) missing.

ASIC sends the following Reject message:

```
8=FIXT.1.1|9=133|35=3|49=ASIC|56=MARKET|34=41|52=20100112-21:43:03.866|45=23|58=Missing Tag  
38 which is required by ASIC FIX Spec. |371=38|372=8|373=4|10=016|
```

## 4. Phase 2 – Certification

### 4.1 Summary

This phase of certification involves the connection and transmission of real-time, production / production-quality data into the ASIC IMSS platform test environment. The data provided in the feed must be robust enough to simulate all of the various order types and message flow scenarios inherent to the market. Between twenty and thirty business days are allotted for this phase of testing.

### 4.2 Validation and Feedback

Phase Two is used to monitor and evaluate the quality and overall stability of the feed. This entails validating the following:

- Consistent and timely provision of start and end of day messages

- Proper message sequencing evidenced by minimal tracking errors within the surveillance system and a clean order book
- Provision of required regulatory markers on specific orders and trades
- Successful intraday feed recovery. (This is validated through a scheduled intraday re-connection test to ensure the market feed can be recovered under typical load conditions)

During this phase, issues that are identified by ASIC will be communicated to the market for remediation.

This phase of certification is deemed complete once ASIC has confirmed that the structure, content and sequencing of the messages conforms to the ASIC FIX Specification and does not generate errors within the FIX Gateway or the SMARTS application itself.

**Table 2: Phase Two Certification**

| Task   | Description  | Purpose   |
|--|--|---|
| Daily transmission of real-time production / production quality data | This phase of certification involves the connection and transmission of real-time, production / production-quality data into the ASIC IMSS platform test environment | To validate message content and message sequencing<br><br>To verify Start-of-Day and End-of-Day messages are sent in the correct sequence and in the correct time period<br><br>To ensure the feed does not create tracking errors within the surveillance system |
| Intraday recovery test   | An intraday re-connection test to ensure the market feed can be recovered under typical load conditions  | To verify the market can quickly and successfully reconnect after both an ASIC-initiated disconnect and a market-initiated disconnect under normal load conditions  |

## 5. Contact Information

| Role | Name | Tel | Email |
|------|------|-----|-------|
|      |      |     |       |