

Outage Communication Standards

Progress Update and Findings
September 2023



1 Introduction

The FIX Trading Community (FIX) Equities & Fixed Income Business Practices working groups have been working on standards for the electronic communication of outages between industry participants. This relates to, and is partly driven by, regulatory activity in this space (notably from ESMA and the FCA), with FIX having participated in recent consultation responses on the subject of market outages.

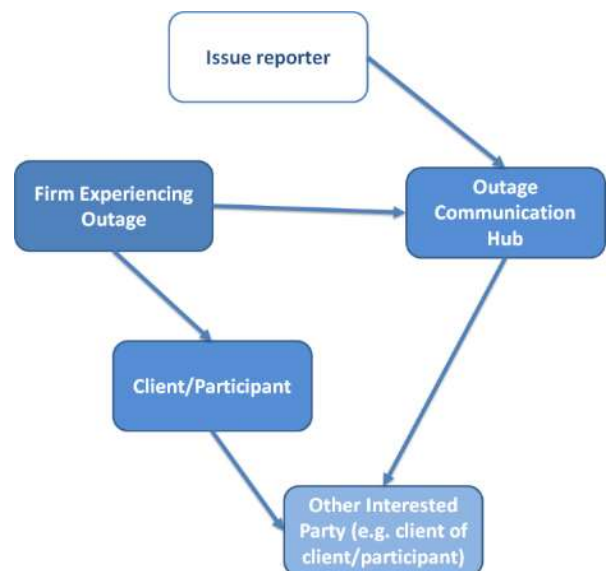
The working groups contain members from across the industry with representation from buy side, sell side, venues and vendors. It is essential for topics such as this that we have engagement and review from as many people as possible, to eliminate any bias in the standards design, maximise quality and facilitate broad adoption of the resultant standards.

We should note that “standards for electronic communication” does not necessarily equate to requiring outage communications to be transmitted over FIX sessions. The standards start with a ‘business model’ describing the flows of information (who sends what to whom and when) with definitions of the elements inside those information flows. We will naturally model all this inside the FIX Protocol, but strongly support use of the same flows and data elements in whatever mechanism is required (e.g., for providing information on website pages). We also would like to remind readers that FIX Protocol messages can be carried over any network with no restriction on the choice of encoding or session, and that FIX’s own standards include support for XML and JSON amongst many others.

2 Scope of Outage Communication Workflows

The working groups very rapidly concluded that communication from market operators to their participants was, while extremely important, only part of the story, and two other flows needed to be considered:

- Onward communication of market outages by participants to their clients, recognising that this isn't simply a question of forwarding messages on as the impact to end clients may not necessarily be the same as the impact on market participants depending, partly, on any mitigating actions being undertaken by participants.
- Communication of outages from other types of firm, for example:
 - Brokers (e.g., loss of connectivity to a market, issues with algorithmic trading systems etc.).
 - Other types of financial market infrastructure (e.g., CCPs, data providers).



The majority of the work so far has focused on the first of these.

The working group has also considered the possibility of the introduction of central ‘hub’ facilities for collecting and disseminating outage information and is working to ensure that its design work supports the potential for the existence of such a facility.

The need for the ability to switch off the flow of updates regarding a specific outage has also been identified, particularly in the case of buy side firms who may be receiving nearly identical updates from all of their brokers.

3 Key Design Points and Findings

3.1 Core Outage Identification Details

A core set of “header” elements are required simply to put the message into context, regardless of the details of the outage itself:

- The firm experiencing the outage (the “impacted firm”) and the firm reporting the outage need to be identified using, where possible, open industry standards (e.g., MI,Cs, LEIs). An outage must be given a unique identifier (by the reporting firm) which does not change during the life of the outage and hence allows messages to be associated to that outage.
- The status of the outage, which the group believes can be codified (e.g., “issue detected with unknown details” all the way through to “resolved”).
- An indicator to facilitate periodic updates of communications (this being noted in ESMA’s final report on this topic, as well as suggested by a number of working group members) while allowing these to be distinguished from messages denoting changes in an outage’s status.
- The time the outage was known or believed to have started.

3.2 Defining the Nature and Scope of an Outage

It is recognised that the actual scope of an outage might not be immediately obvious and hence the design needs to allow for additional details to be provided over time. The key elements identified by the working group in terms of what is going on are:

- The category of impacted functionality, which the group believes should be codified where possible (but extendible where required), e.g., ‘trading’, ‘market data’, ‘connectivity’.
- Where appropriate, the scope in terms of lists of specific instruments and/or market segments, with a free text option.
- Where appropriate, the scope in terms of the status of individual orders and/or an indicator to describe what is happening to orders that were open at the time of the outage (e.g., persisted, cancelled).
- Where applicable, the current status of the market.
- Expected (i.e., estimated) restart time.
- Scheduled (i.e., confirmed) restart time.
- Free text for other relevant information (e.g., details of how the service is going to be brought back).

3.3 Defining the Severity and Impact of an Outage

The working group has identified a number of data elements needed to describe severity and impact:

- Severity from the perspective of the impacted firm. The group believes this can be codified (e.g., no service, latency, loss of functionality, info/warning).
- Severity from the perspective of the firm receiving the message (also codified). Having these two severities separated allows intermediaries (e.g., a broker communicating a market outage to their clients) to apply an interpretative/filtering step. For example a 'no service' outage from a market's perspective may simply be an 'info/warning' for an end client if the service in question simply isn't used by the end client (or indeed the broker) or the broker is able to use an alternative but equivalent service (e.g., if the service in question is a specific market data feed, an alternative working feed may be available).
- Nature of impact from the perspective of the impacted firm. A free text field to allow specific details to be communicated.
- Nature of impact from the perspective of the firm receiving the message.
- Who is impacted – firms do not necessarily want to know the identities of other impacted firms but do want to know whether only they are affected, everybody is affected, just some firms or if this information simply isn't currently known.

4 Next Steps

As mentioned earlier, maximising the size of the group contributing to and reviewing this work is key. An important part of this work is validating the design by running through case studies (real or imagined) and testing theoretical outage messages for completeness and clarity.

All representatives of FIX member firms are encouraged to participate in this important work. Please contact us at fix@fixtrading.org to learn more.

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