Technical Specification Working Group

March 26, 2020

Agenda

➤ General Announcements

➤ Planned Industry Member Technical Specification Updates (Phase 2a/2b)

➤ Alternative Production Certification Requirements for CRAs

➤ Guidance for Reporting Child Orders

➤ Fulfillment Amendment Events

➤ Exchange Origin Codes

➤ IMIDs on Order Routing Events

➤ Clock Sync Alert 2020-02

General Announcements

➢Industry Member Technical Specifications v3.1.0 r1 (Phase 2c) and Industry Member Reporting Scenarios v3.0 (Phase 2c) are planned for publication next week.

Planned Industry Member Technical Specification Updates (Phase 2a/2b) – Last Updated 3/24/2020

#	Status	Error Code	Summary	Resolution	Release Date	Area
1	Open	N/A	Update data type timestamp to clarify UTC time: Timestamps submitted in Coordinated Universal Time (UTC) must not be adjusted for Eastern Time. Timestamps submitted in STRING format must be in Eastern Time.	Documentation Update	To be scheduled	IM Technical Specification
2	Open	N/A	In instances where the market maker sends a market maker order through an options exchange protocol that does not require an exchange origin code, Industry Members must populate the exchOriginCode with a value of 'MM'.	Documentation Update	To be scheduled	IM Technical Specification
3	Open	N/A	v2.2.1 r3 was updated to note that the marketCenterID and REC fields are mutually exclusive. This language was updated in the marketCenterID field description but was not updated in REC field description.	Documentation Update	To be scheduled	IM Technical Specification
4	Open	N/A	Add values for LTSE: • marketCenterID: LT	Documentation Update	To be scheduled	IM Technical Specification
5	Open	N/A	Add values for MIAMI Pearl Equities: • destination: PEARLEQ • senderIMID: PEARLEQ • marketCenterID: H	Documentation Update	To be scheduled	IM Technical Specification
6	Open	N/A	Clarification for the population of Parent Key and Prior Key identifiers will be added to specify when a new Order Key, Trade Key or Fulfillment Key is not assigned, the Parent Key identifier or Prior Key identifier must remain blank; related Error Codes will be added.	Documentation Update	To be scheduled	IM Technical Specification

The Planned Industry Member Technical Specification Updates list is updated periodically and available at www.catnmsplan.com under the Industry Member Specifications tab.

New Proposed Requirements for CAT Reporters and CAT Reporting Agents

CRAs that are not a BD

- Must do a load test of full volume.
  - For CRAs who have some B/Ds that are not ready to submit (e.g. due to front office code freeze) – they should estimate the size of the events to be processed and expected infrastructure utilization
  - All CRAs should be able to provide a complete list of B/Ds they expect to report for

- Must contain all primary event types to demonstrate understanding of all validations
  - Vendors will need to confirm what event types they intend to support (not every vendor will support every primary event type)
- CRA certification will be in line with IMID certification (only required for initial entry phase)

BDs that report for themselves and other BDs

- Must certify under existing requirements for all of the BD's own IMIDs
- If the other BDs they will report on behalf of will exceed 50% of their anticipated daily production volume across all entities, they must do a load test as well.

All other BDs

- Must certify under existing requirements

Prior to the April 13 production open date, FINRA CAT will port all CRA relationships for any firm that has certified. A certified CRA will not be able to submit data to production on behalf of an uncertified BD since the relationships for that BD will not be ported to production.

General Guidance for Child Order Events

➢ Child Order events are **not required** to be reported to CAT, but are provided for the convenience of Industry Members to help model these types of order handling scenarios.

➢ A Child Order event may be generated off of another Child Order event without limitation (a child order can have more children, grandchildren, etc.).

➢ When originating a Child Order event, Industry Members are required to generate a new Order Key.

- The *parentOrderID* and *parentOrderKeyDate* are required fields used to generate the Parent Order Key in order to link to the parent event.
- The Order Key on a Child Order event must **not** equal the Parent Order Key.

➢ Any event that can happen to a New Order or Order Accepted event can happen to a Child Order event. A Child Order event can be routed, filled, modified, cancelled, etc.

➢ If a parent order is cancelled, a Child Order Cancelled event must be reported for each open child order.

General Guidance for Order Fulfillment Amendment Events

➢ The purpose of the Order Fulfillment Amendment event (MEFA) is to report an amendment to a previously reported Order Fulfillment Event (MEOF) that occurs on the same day or a subsequent day.

➢ The MEFA event must capture the entire state of the fulfillment after it has been amended, even though some of the data elements remain unchanged.

➢ A MEFA is *not* required in scenarios where:

- A trade correction comes *before* any initial fulfillment has been made, and the Industry Member directly gives the corrected shares to the customer.

- An Industry Member makes a correction via a debit/credit to the customer's account instead of modifying the executed shares given back to the customer.

Cancelling Order Fulfillment Events

➢ In Phase 2a, if an Industry Member reports a Fulfillment Amendment event, then later cancels the fulfillment, the Industry Member must capture the cancellation on the original MEOF by submitting a COR with the *cancelFlag* marked as true and the associated *cancelTimestamp*.

➢ The cancellation of the MEFA would be implied based on the cancellation of the fulfillment.

➢ For Phase 2c, FINRA CAT is exploring adding the cancelFlag and cancelTimestamp fields to MEFA events.

Exchange Origin Code

➤ *exchOriginCode* is a free text field signifying the origin of the account exactly as sent to an Options exchange. The values populated are being checked for syntax only, and are not being validated against the values allowed by each exchange.

➤ The *exchOriginCode* field is required on MOOR events with a *destinationType* of 'E'. However, FINRA CAT is aware that options exchanges do not always require an exchange origin code for certain market maker protocols. In these instances, Industry Members must populate a value of 'MM' to indicate that the origin was a market maker instead of leaving the field blank to avoid a rejection (Refer to FAQ E28).

Population of IMIDs in Order Routing Events

- ➤ CAT Alert 2018-003 was updated on 12/10/19 with changes to how IMIDs should be populated in order routing events in order to manage IMID conflicts.

  - These changes are reflected in section 2.4.1 of the IM spec. (This was discussed with the TSWG on 1/16/20).

- ➤ The Sender IMID, Routing Party, Receiver IMID and Destination fields must be formatted as **CRD:IMID**.

- ➤ These requirements are currently optional, but will become required beginning with the onset of interfirm linkage.

Example of IMIDs in Order Routing Events

➢ CAT Reporter ABCD (CRD 123) routes an order to DEFG (CRD 456). CAT Reporter DEFG receives the order.

- Routing information populated on the Route Event reported by CAT Reporter ABCD includes:

   senderIMID = 123:ABCD
   destinationType = F
   destination = 456:DEFG

- Routing information populated on the Order Accept Event reported by CAT Reporter DEFG includes:

   senderIMID = 123:ABCD
   senderType = F
   receiverIMID = 456:DEFG

CAT Alert 2020-02: Clock Synchronization Self-Reporting Deviation Scope

- ➢ CAT Reporters are required to self-report deviations of clock synchronizations standards required under SRO Rules and the CAT NMS Plan to FINRA CAT.

- ➢ The self-reporting obligation only applies to systems that are used to create and record CAT Reportable Events, when that system is creating and recording CAT Reportable Events.

  - • For example, if a system drifts out of compliance with the standard at a time when the system is not creating and recording CAT Reportable Events, this would not need to be reported to the Plan Processor.

- ➢ The self-reporting obligation is based on **each individual occurrence** of excessive clock drift on a given device or server while creating and recording CAT reportable events.

CAT Alert 2020-02: Clock Synchronization Self-Reporting Standards

- Large Drift from Clock Synchronization Standards: The Industry Member would need to self-report a deviation if a system creating and recording CAT Reportable Events drifts out of compliance with the established standards by **twice the standard or 100 milliseconds** for all systems other than those used for Manual Order Events and twice the standard or 2 seconds for systems that record Manual Order Events.

- Persistent Drift from Clock Synchronization Standards: The Industry Member would need to self-report a deviation if a system creating and recording CAT Reportable Events drifts out of compliance with the established standards **10 times in one rolling 24-hour period** at any time when the system is recording a timestamp on data that is reportable to the CAT on a given device or server. (The 10 times standard also applies to systems that process Manual Order events.)

CAT Alert 2020-02: Deviation Thresholds

	Clock Synchronization Standard	Self-Reporting Triggers	
		Large Drift	Persistent Drift
All Events, except Manual	50 milliseconds	1 drift 100 milliseconds or greater	10 drifts in rolling 24 hour period of 50 milliseconds or greater
Manual Events	1 second	1 drift two seconds or greater	10 drifts in rolling 24 hour period of 1 seconds or greater

CAT Alert 2020–02: Clock Synchronization Self–Reporting Requirements

➢ Deviations must be reported by T+3 at 8 a.m. If a system has multiple incidents of drift that trigger the self-reporting obligation, it is anticipated that the incidents can be captured on a single report for each trading day.

➢ The self-reporting form is still under development, but it is anticipated the form will require at least the following information:

- Designate which self-reporting threshold has been breached.

- Indicate how frequently the system's business clocks are synchronized and monitored in order to provide insight into how long the business clock may have been in deviation of the standard.

- Specify each recorded time that the business clock drift exceeded the self-reporting threshold. Only one report will be required for each trading day.

- If multiple reportable incidents occur due to a single systems event, CAT Reporters will be able to report the incidents aggregated in a manner that ties them to the single event.

- If the reportable incident persists over more than one trading day the report should refer back to the original report for that incident.

FINRA CAT Helpdesk

Questions may be directed to the FINRA CAT Helpdesk at 888-696-3348 or help@finracat.com