Industry Test Release Status

April 14, 2020

Agenda

- Industry Test Release Update
- General Announcements & Reminders
- Upcoming Key Dates
- Q&A

Industry Test Release Update

Industry Member 2a/2b - Release 1 (File & Data Integrity) Release Rollout

	Open			
11/18/2019 Industry Test Release 1.1	12/16/2019 Industry Test Release 1.2	2/24/2020 Industry Test Release 1.3	03/23/2020 Industry Test Release 1.4	4/13/20- Prod Environment Open 4/20/2020 – 2a Go-Live 5/18/2020 – 2b Go-Live
 CAT Reporter Portal: ATS Order Types CAT Reporter Portal: CAT Reporting Relationships Multi-Factor Authentication Enabled Publication of IMID & Conflict List to catnmsplan.com Publication of Issue/Option Symbol Reference Lists to catnmsplan.com 	 Industry Test Open for Machine-to-Machine File & Data Integrity Validations & Feedback CAT Reporter Portal: Basic File Statistics CAT Reporter Portal: Manual File Upload 	 CAT Reporter Portal: File Submission feedback CAT Reporter Portal: Reporting Statistics (i.e. number of records received, accepted, rejected and feedback summaries) CAT Reporter Portal: Error Rates CAT Reporter Portal: Direct data entry & corrections CAT Reporter Portal: Bulk Repair of applicable Syntax/Semantic Errors 	 Announcements System Status 	 2a Go-Live – Industry Member 2a Reporting Required on April 20 2b Go-Live – Industry Member 2b Reporting Required on May 18

Industry Test Status – As of April 9, 2020 Statistics

Item	Statistic – Last Week	Statistic – This Week	Increase/Decrease
Number of Firms Certified	264	304	Increased by 40 firms
Number of Firms operating under CAT Reporter Agreements	1,354	1,372	Increased by 18 firms
Number of Reporting Relationships Entered	1,827 relationships from 1,007 firms	1,927 relationships from 1,039 firms	Increased by 100 across 32 firms
Number of ATS Order Types Entered	609 order types from 23 ATS firms	611 order types from 24 ATS firms	Increased by 1 order types across 1 ATS firm
Number of Total Submitters	162	165	Increased by 3 submitters
Number of IMIDs	1,184 from 805 firms	1,325 from 927 firms	Increased by 141 across 122 firms
Number of Files Received	1,830,053 • Reporter Portal: 21,729 • Private Line: 1,808,324	1,954,181 • Reporter Portal: 22,453 • Private Line: 1,931,728	Increased by 124,128 Reporter Portal: 724 Private Line: 123,404
Number of Files Rejected	382,233	384,814	Increased by 2,581
File Reject Rate	20.88%	19.68%	Decreased by 1.20%

Industry Test Status – April 6–April 9, 2020 Statistics

	Product Type									
CAT Processing date	Equities				Options			DEL/Unparsed records		
	Processed	Rejected	Rejection Rate	Processed	Rejected	Rejection Rate	Processed	Rejected	Rejection Rate	
4/6/2020	7,056,355,249	9,771,328	0.14%	348,262,511	3,090,109	0.89%	652,358	652,239	99.98%	
4/7/2020	10,245,125,722	18,360,250	0.18%	548,104,817	4,475,429	0.82%	8,390,782	297,627	3.55%	
4/8/2020	5,617,949,966	153,470,516	2.73%	396,868,765	1,971,387	0.50%	853	832	97.54%	
4/9/2020	9,783,213,309	23,221,024	0.24%	620,228,323	573,423	0.09%	1,042	956	91.75%	
Total	32,702,644,246	204,823,118	0.63%	1,913,464,416	10,110,348	0.53%	9,045,035	951,654	99.99%	

FINRA CAT Open Issues List – Release Planned/Workaround Provided

#	Status	Error Code	Summary	Resolution	Priority	Test Environment Targeted Release Date/Workaround	Production Environment Targeted Release Date/Workaround	Area
1	Open	N/A	Reporter Portal is not accurately reflecting Repair Count and Adjusted Error Rate when corrections submitted for a single day per firm exceed 100,000. Additionally, Error Counts on Error Summary screen do not reflect errors in excess of 100,000.	Code Release	Medium	Workaround: FINRA CAT Helpdesk will support Long term fix: Release planning in progress	Workaround: FINRA CAT Helpdesk will support Long term fix: Release planning in progress	Statistics
2	Open	2019	NYSE floor broker booth numbers are not included in reference data causing Route event rejections.	Reference Data Update	Medium	Workaround: Manual updates to Reference Data by 4/13/2020 Long term fix: 4/17/2020	Workaround: Manual updates to Reference Data by 4/13/2020 Long term fix: 4/17/2020	Reference Data
3	Open	N/A	Few firms are experiencing isolated timeout issues errors when accessing the Error Summary Screen in the Portal.	Code Release	Low	4/20/2020	5/4/2020	Reporter Portal
4	NEW– Open	N/A	Firms are unable to edit a record in the Pending Submissions screen if they are using Firefox browser and have logged into the Portal via SRG. This issue does not impact creating or submitting an event via the Portal.	Under Review	Low	Workaround: Use Chrome Long term fix: Under Review	Workaround: Use Chrome Long term fix: Under Review	Reporter Portal

FINRA CAT Open Issues List – Planned Enhancements (post 4/13/2020)

#	Status	Error Code	Summary	Resolution	Priority	Test Environment Targeted Release Date	Production Environment Targeted Release Date	Area
1	Open	Multiple	FINRA CAT is accepting the following scenario instead of rejecting – Future dates in some fields.	Code Release	Low	To be scheduled	To be scheduled	Validations
2	Open	2133	For Name/Value Pair Data type fields, providing a value that is not in allowable values list returns error code 2133 (Additional Field) instead of error code 2101 (Missing or Invalid timeInForce).	Code Release	Low	To be scheduled	To be scheduled	Validations
3	Open	2122	Incorrect error code is generated when an array field (e.g., clientDetails) is provided as a Name/Value pair.	Code Release	Low	To be scheduled	To be scheduled	Validations
4	Open	N/A	Isolated issue with Timeout Warnings at Integrity phase resulting in missing File Integrity feedback.	Under Review	Low	To be scheduled	To be scheduled	Feedback
5	Open	1121	Few firms are incorrectly receiving file integrity errors due to pairing issues between the meta and data files.	Code Release	Low	To be scheduled	To be scheduled	Validations
6	NEW– Open	2019	FINRA CAT is accepting the following scenario instead of rejecting – <i>destinationType</i> = F and <i>destination</i> not provided on Order Route.	Code Release	High	5/11/2020	5/18/2020	Validations
7	NEW- Open	Multiple	FINRA CAT is accepting negative values in quantity fields.	Code Release	High	5/11/2020	5/18/2020	Validations

FINRA CAT Recently Closed Issues List- As of 4/14/20

#	Status	Error Code	Summary	Resolution	Priority	Targeted Release Date	Area
1	Closed	2153	Isolated instances of data file not readable error for well-formed JSON and CSV data files.	Code Release	Low	4/13/2020	Validations

Planned Industry Member Technical Specification Updates- Last Updated 4/14/2020

#	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
7	Open	N/A	Update Data Types section to remove the requirement that Boolean must be lower case.	Documentation Update	To be scheduled	IM Technical Specification
8	Open	N/A	Update section 2.4.1 with additional clarification and examples outlined in CAT Alert 2018- 003. Specifically, other IMIDs in an event (e.g. senderIMID, receiverIMID) do not need to equal the CAT Reporter IMID.	Documentation Update	To be scheduled	IM Technical Specification
9	NEW – Open	N/A	 Related Error Codes will be added to validate that: On Order Accept, Order Modified and Quote Received events, the <i>senderIMID</i> and <i>receiverIMID</i> cannot be equal On Order Route and New Quote events, <i>senderIMID</i> and <i>destination</i> cannot be equal. 	Documentation Update	To be scheduled	IM Technical Specification

General Announcements & Reminders

FINRA CAT Announcements

- The Production Environment is open and able to receive files. Industry Members have both successfully accessed the Production Environment and submitted files.
- Connectivity to the CAT Production Environment via SFTP will be interrupted for approximately 30 minutes commencing at 7:00 pm ET on Tuesday, April 14, 2020. Access to the CAT Reporter Portal and to the CAT Test Environment will not be impacted.
- >No further updates on the SEC No Action Letter.
- The SEC approved the Participant's request for exemptive relief to allow Participants and Industry Members to truncate timestamps captured in increments more granular than nanoseconds to nanoseconds for submission to CAT.
- Rather than the previously scheduled Daily Industry Checkpoint Calls, Consolidated Audit Trail, LLC and FINRA CAT, LLC will maintain our Weekly Industry Checkpoint Calls on Tuesdays at 4:15 pm ET until further notice.

FINRA CAT Observations

File Submission – FINRA CAT Recommended Practice

- File Submissions should be one file per IMID within specified file maximums:
 - CAT Reporter Portal: 1GB uncompressed/100,000 records
 - Machine-to-Machine: 100GB uncompressed
- > Benefit to Submitters:
 - Fewer files for submitter to manage
 - Expedited feedback response

Note: SFTP (Machine-to-Machine) is **not** limited by 1GB/100,000 record limits on the Reporter Portal. Files may be up to **100GB** uncompressed which can contain significantly more than 100,000 records. As stated above, feedback times will be faster with fewer files.

FINRA CAT Reminders

- Duo MFA had not planned to support devices running end-of-life operating systems after April 13, 2020; this has been deferred to a later date.
- To ensure all securities reportable during any given transaction date are identified for reporting, firms are encouraged to use both the SOD and EOD files.
- All Test Symbols (equity and options) will be rejected in the Production Environment.
- The processing date of all submissions will be assigned based on the received timestamp of the associated metadata file. If a data file is received prior to T+1 8:00 AM EST with the associated metadata file submitted after T+1 8:00 AM EST, the submissions will be considered late.

FINRA CAT Reminders

- The following will be available in the Production Environment (on April 13, 2020) prior to Test Environment (on April 20, 2020): export on error search, Market Center IDs of "LT" and "H", and Group Repair expanded from 500 to 10,000 records.
- The Group Repair eligibility logic is being enhanced. As a result, records eligible for Group Repair will not be marked with 'Y' for dates prior to April 20, 2020 in the Test Environment (Production Environment is not affected by this enhancement).

Onboarding -Certification of Production Readiness Testing

- Once CAT Reporters have completed all onboarding steps, including the successful completion of the Production Readiness Testing, each IM and CRA must contact the FINRA CAT Helpdesk (888-696-3348 or <u>help@finracat.com</u>).
- The FINRA CAT Helpdesk will require the Processing Date(s) on which the testing occurred.
- > Upon verification of the Production Readiness Testing and all other Onboarding Steps by FINRA CAT, CAT Reporters will be granted access to the CAT Production Environment, and a notification confirming access will be sent.

Upcoming Key Dates

Upcoming Key Dates for Release 2a/2b

Торіс	Event	Date
Industry Call: Industry Testing Checkpoint	Weekly Industry Testing Checkpoint Calls – Every Tuesday at 4:15 pm (ET)	January 7, 2020 until further notice
Industry Test Certification	Industry Members and CAT Reporting Agents must complete production readiness testing for 2a reporting	April 6, 2020*
Production Readiness	Production Environment Opens for Production Readiness	April 13, 2020
Production Go-Live	Production Go-Live for Equities 2a file submission and data integrity validations	April 20, 2020
Industry Call: Production Release Checkpoint	Regularly Scheduled Weekly Industry Testing Checkpoint Calls and Status of 2a Go-Live	April 21, 2020
Industry Test Certification	Industry Members and CAT Reporting Agents must complete production readiness testing for 2b reporting	May 4, 2020
Industry Call: Industry Testing Checkpoint	Daily Industry Testing Checkpoint Calls at 4:15 pm (ET)	May 4, 2020 – May 15, 2020

* As noted in the Participant's Statement on the SEC's No Action Letter, this date is now May 6, 2020.

The timeline of Phase 2a/2b Release 1 (File Validation & Data Integrity) can be found at <u>https://catnmsplan.com/timeline</u>

Upcoming Key Dates for Release 2a/2b

Торіс	Event	Date
Production Go-Live	Production Go-Live for Options 2b file submission and data integrity validations	May 18, 2020
Industry Call: Production Release Checkpoint	Industry Call - Status of 2b Go-Live	May 19, 2020
Industry Webinar and Demo	Industry Webinar and Demo of Compliance Report Card	June 2, 2020
Production Go-Live	Release of Industry Member Compliance Report Card for Equities ONLY	June 19, 2020
Production Go-Live	Release of Industry Member Compliance Report Card including Equities and Options	July 20, 2020

How to Ask a Question during Today's Call

• For participants using computer audio:

- Click the "Raise Hand" button at the bottom of the participants window.
- A visual prompt will indicate that your line has been unmuted.

• For participants using phone audio:

- Enter *9 on your phone keypad.
- An audio prompt will indicate that your line has been unmuted.

FINRA CAT Helpdesk

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