Industry Test Release Status

March 3, 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

Live in Industry Test

11/18/2019 Industry Test Release 1.1

- 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

12/16/2019 Industry Test Release 1.2

- Industry Test Open for Machine-to-Machine File
 Data Integrity
 Validations & Feedback
- CAT Reporter Portal: Basic File Statistics
- CAT Reporter Portal:
 Manual File Upload

2/24/2020 Industry Test Release 1.3

- 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

03/23/2020 Industry Test Release 1.4

- Announcements
- System Status

4/20/2020 – 2a Go-Live 5/18/2020 – 2b Go-Live

- 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 March 2, 2020 Statistics

Item	Statistic – Last Week	Statistic – This Week	Increase/Decrease
Number of Firms Certified (New Metric)	N/A	8	N/A
Number of Firms operating under CAT Reporter Agreements	1,177	1,206	Increased by 29
Number of Reporting Relationships Entered	1,290 relationships from 752 firms	1,388 relationships from 796 firms	Increased by 98 across 44 firms
Number of ATS Order Types Entered	567 order types from 20 ATS firms	582 order types from 21 ATS firms	Increased by 15 across 1 firm
Number of Total Submitters	118	120	Increased by 2
Number of IMIDs	438 from 370 firms	482 from 393 firms	Increased by 44 across 23 firms
Number of Files Received	350,152 • Reporter Portal: 13,271 • Private Line: 336,881	503,343Reporter Portal: 14,867Private Line: 488,476	Increased by 152,826 • Reporter Portal: 1,594 • Private Line: 111,232
Number of Files Rejected	92,769	106,318	Increased by 13,549
File Reject Rate	26.47%	21.12%	Decreased by 5.35%
Number of Records Processed in Ingestion Phase (Record level validations)	16,330,201,416	26,737,231,864	Increased by 10,407,030,448
Number of Processed Records Rejected	1,659,614,255	1,718,811,167	Increased by 59,196,912
Current Reject Rate Overall of Processed Data	10.16%	6.43%	Decreased by 3.73%

Industry Test Status – February 25 – March 2, 2020 Statistics

CAT Processing Date	# Total Submitters	# of IMIDs	# of Files Received	# of Files Rejected	File Reject Rate	# of Validated Records	# of Validated Records Rejected	Validated Records Reject Rate
2/25/2020	60	272	34,012	2425	7.13%	2,083,530,410	7,452,801	0.36%
2/26/2020	66	288	28,839	1331	4.62%	2,137,858,786	16,343,672	0.76%
2/27/2020	63	282	17,555	951	5.42%	1,653,481,249	15,353,809	0.93%
2/28/2020	65	288	61,196	8208	13.41%	3,313,293,431	6,870,351	0.21%
3/2/2020	66	299	11,224	635	5.66%	1,218,866,356	13,176,279	1.08%
Total			152,826	13,550	8.87%	10,407,030,232 * Approx 97% Equity Events & 3% Option Events	*Approx 92% Equity Events, 6% Option Events & 2% DEL or Unparsed Events	0.57%

Known FINRA CAT Issues – Open

#	Status	Error Code	Summary	Resolution	Workaround	Targeted Release Date	Area
1	Open	Multiple	FINRA CAT is accepting the following scenario instead of rejecting – Future dates in some fields.	Under Review	None	N/A	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).	Under Review	None	N/A	Validations
3	Open	2122	Incorrect error code is generated when an array field (eg: clientDetails) is provided as a Name/Value pair.	Under Review	None	N/A	Validations
4	Open	2142	Space in multi-dimensional array field not treated as blank. For E.g space in aggregatedOrders when representativeInd is populated as 'YF', 'YE' or 'N' - Rejecting as Invalid aggregatedOrders (Error Code 2142).	Code Release	None	To be Scheduled	Validations
5	Open	2153	Isolated instances of data file not readable error for well-formed JSON data files.	Under Review	None	N/A	Validations
6	Open	1116	Isolated issue where exceeding length in file version field in metadata file - Not generating integrity failed feedback	Under Review	None	N/A	Validations
7	Open	2081	receivedQuoteID (optional for 2a) blank - Rejecting as Invalid receivedQuoteID	Code Release	None	To be scheduled	Validations/ Reporter Portal
8	Open	2019	Route event rejecting for invalid destination when destination is a NYSE floor broker booth number.	Under Review	None	N/A	Reference Data
9	Open	2133	Multi-dimensional array fields in MEOTS, MOOF and MOFA events - Rejecting as invalid because portal includes additional fields (FDID and accountHolderType) that are not applicable to these specific events.	Code Release	None	To be scheduled	Reporter Portal
10	Open	N/A	Reporter Portal is not accurately reflecting Repair Count and Adjusted Error Rate when corrections submitted for a single day per firm exceeds 100,000. Additionally, Error Counts on Error Summary screen do not reflect errors in excess of 100,000.	Code Release	None	To be scheduled	Statistics
11	Open	N/A	Firms not getting credit for rejections corrected via a file delete instruction.	Code Release	None	To be scheduled	Statistics
12	NEW – Open	N/A	Late flag determination is incorrect for events received after 4:15 PM and reported on-time.	Code Release	None	To be scheduled	Statistics
13	NEW – Open	N/A	Isolated issue with Timeout Warnings at Integrity phase resulting in missing File Integrity feedback.	Under Review	None	N/A	Feedback

Known FINRA CAT Issues - Recently Closed

#	Status	Error Code	Summary	Resolution	Workaround	Release Date	Area
1	Closed	N/A	Metadata File Rejection count does not correctly count all metadata rejection scenarios.	Code Release	None	2/24/2020	Statistics
2	Closed	2098	Equity symbols expiration/addition intra day - Rejecting as symbol not effective.	Code Release	None	2/24/2020	Validations
3	Closed	2036	handlingInstructions value of 'RAR' (optional 2a) rejecting as invalid.	Code Release	None	2/24/2020	Validations
4	Closed	2043	manualOrderID (optional for 2a) blank - Rejecting as Invalid manualOrderID when electronicDupFlag is populated as true.	Code Release	None	2/24/2020	Validations
5	Closed	2048	For ATS firms, <blank> <i>nbboTimestamp</i> if <i>nbboSource</i> is NA rejecting as invalid.</blank>	Code Release	None	2/24/2020	Validations

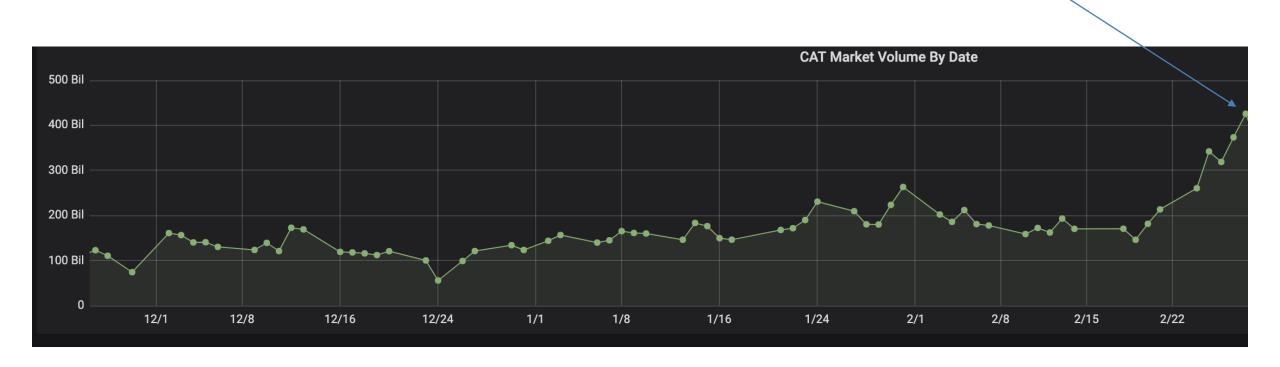
General Announcements & Reminders

FINRA CAT Reminders

- The Error Summary Export feature is scheduled for release prior to Go-Live.
- ➤ Error details are not available for data submitted prior to February 24, 2020.
- Certification requires a valid CAT Reporter Agreement.
- Firms can now also access the Reporter Portal using a U2F Security Key.
- CATNMSPlan.com website redesign is complete.

CAT Production Plan Participant and SIP/OPRA Volume

Feb 28, 2020 - 426 Billion Records



Onboarding – Certification of Production Readiness Testing

Self Reporters

- Step 1: Successfully connect to SFTP and/or login to the CAT Reporter Portal Test Environment
- Step 2: Successfully submit at least one data file and one metadata file to the Test Environment for each of its CAT Reporter IMIDs without error
- Step 3: Successfully submit a single day of production data to the Test Environment with an error rate of less than 10% (must include all IMIDs with reportable activity on the chosen day)
- Step 4: Record the CAT Processing Date on which the single day of production data was submitted to the Test Environment

CAT Reporting Agents

- **Step 1:** Successfully connect to SFTP and/or login to the CAT Reporter Portal Test Environment
- Step 2: Verify the CAT Reporting Agent Relationship in the Test Environment to ensure the CRA can transmit the data to CAT successfully
- Step 3: Successfully submit at least one data file and one metadata file to the Test Environment for each CAT Reporter IMID for which it plans to report without error
- Step 4: Successfully submit a single day of production data to the Test Environment with an error rate of less than 10% (must include all IMIDs with reportable activity on the chosen day)
- Step 5: Record the CAT Processing Date on which the single day of production data was submitted to the Test Environment

Industry Members using a CAT Reporting Agent

- Step 1: Firm and CRA successfully connect to SFTP and/or login to the CAT Reporter Portal Test Environment
- Step 2: CAT Reporter defines one or more CAT Reporting Agent
 Relationships in the Test Environment
- Step 3: Record the CAT Processing Date(s) on which each CRA has successfully submitted a single day of production to the Test Environment on the Industry Member's behalf. NOTE: Each CAT Reporting Agent reporting on behalf of the CAT Reporter must complete a production readiness test but do not have to do so on the same production day. The combined total error rate must be less than 10%

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 help@finracat.com).
- > 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.

FINRA CAT Onboarding Guide is posted at https://catnmsplan.com/registration/

Upcoming Key Dates

Upcoming Key Dates for Release 2a/2b

Topic	Event	Date
Industry Call: Industry Testing Checkpoint	Weekly Industry Testing Checkpoint Calls – Every Tuesday at 4:15 pm (ET)	January 7 – March 20, 2020
Industry Webinar	Industry Webinar: Production Readiness Testing	March 4, 2020
Industry Test Release 1.4	Industry Test Release of: - CAT Reporter Portal Announcements & System Status	March 23, 2020
Industry Call: Industry Testing Checkpoint	Daily Industry Testing Checkpoint Calls at 4:15 pm (ET)	March 23, 2020 – April 3, 2020
Industry Test Certification	Industry Members and CAT Reporting Agents must complete production readiness testing for 2a reporting	April 6, 2020
Industry Call: Industry Testing Checkpoint	Weekly Industry Testing Checkpoint Calls - Every Tuesday at 4:15 pm (ET)	April 6, 2020 – May 1, 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

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

Upcoming Key Dates for Release 2a/2b

Topic	Event	Date
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
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 "Participants" button at the bottom of the app window, then 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