
Industry Checkpoint Call

August 10, 2021

Agenda

- Production Statistics
- Open Issues
- SIFMA Test
- General Announcements and Reminders
- Upcoming Key Dates
- Phase 2d Updates
- Q&A
- Appendix- Phase 2d Cutover: Schema Changes

Production Statistics

Equities – Rolling Five Day Period

Initial T+1 vs. T+5 8 am Data Ready for Regulators

July 22, 2021 – August 4, 2021

Trade Date	Late%	Rejection Initial	Rejection Adjusted	Intrafirm Initial	Intrafirm Adjusted	Interfirm Sent Initial	Interfirm Sent Adjusted	Interfirm Received Initial	Interfirm Received Adjusted	Exchange Initial	Exchange Adjusted	TRF Initial	TRF Adjusted	Overall Error Rate Initial	Overall Error Rate Adjusted
7/22/2021	.4909%	.0019%	.0001%	.0033%	.0028%	.0030%	.0012%	1.1560%	.0043%	.0057%	.0008%	1.9576%	1.9275%	.6489%	.4955%
7/23/2021	.0038%	.0021%	.0000%	.0035%	.0029%	.0031%	.0016%	.0075%	.0055%	.0058%	.0006%	1.8743%	1.8436%	.0126%	.0088%
7/26/2021	.0125%	.0021%	.0001%	.0038%	.0033%	.0045%	.0011%	.0141%	.0050%	.0055%	.0010%	2.7213%	2.6938%	.0234%	.0186%
7/27/2021	2.2162%	.0014%	.0001%	.0030%	.0024%	.0046%	.0038%	5.4755%	.0100%	.0054%	.0005%	1.9134%	1.8726%	2.9323%	2.2212%
7/28/2021	.0001%	.0017%	.0001%	.0033%	.0026%	.0028%	.0016%	.0075%	.0072%	.0047%	.0006%	1.9260%	1.8942%	.0077%	.0047%
7/29/2021	.0707%	.0018%	.0000%	.1264%	.0032%	.5622%	.0007%	.0049%	.0044%	.0055%	.0007%	1.9134%	1.8790%	.2279%	.0756%
7/30/2021	.0392%	.0019%	.0015%	.0028%	.0024%	.0029%	.0016%	.1018%	.0060%	.0053%	.0046%	2.0277%	1.9863%	.0593%	.0459%
8/2/2021	1.2887%	.0019%	.0000%	.0039%	.0028%	1.8754%	.0010%	2.7438%	.0045%	.0055%	.0013%	2.7786%	2.7639%	1.8796%	1.2936%
8/3/2021	.0725%	.0020%	.0014%	.1871%	.0603%	.5705%	.0014%	.0081%	.0054%	.0073%	.0010%	1.9634%	1.9479%	.2709%	.1153%
8/4/2021	.0286%	.0021%	.0013%	.0158%	.0026%	.0018%	.0011%	.0757%	.0047%	.0072%	.0069%	2.1364%	2.1052%	.0543%	.0357%

Options - Rolling Five Day Period

Initial T+1 vs. T+5 8 am Data Ready for Regulators

July 22, 2021 - August 4, 2021

Trade Date	Late%	Rejection Initial	Rejection Adjusted	Intrafirm Initial	Intrafirm Adjusted	Interfirm Sent Initial	Interfirm Sent Adjusted	Interfirm Received Initial	Interfirm Received Adjusted	Exchange Initial	Exchange Adjusted	Overall Error Rate Initial	Overall Error Rate Adjusted
7/22/2021	.0014%	.0083%	.0082%	.0109%	.0104%	.0481%	.0457%	.0836%	.0674%	.0175%	.0169%	.0246%	.0238%
7/23/2021	.0002%	.0393%	.0392%	.0128%	.0104%	.0235%	.0224%	.0661%	.0587%	.0142%	.0137%	.0540%	.0520%
7/26/2021	.0010%	.0092%	.0091%	.0059%	.0052%	.0564%	.0550%	.0661%	.0599%	51.5483%	.0108%	16.7680%	.0185%
7/27/2021	.0007%	.0073%	.0072%	.1371%	.1366%	.0462%	.0449%	.0568%	.0522%	.0042%	.0037%	.1037%	.1030%
7/28/2021	.0001%	.0119%	.0119%	.0042%	.0041%	.0520%	.0505%	.0586%	.0540%	.0049%	.0045%	.0178%	.0176%
7/29/2021	.0003%	.0089%	.0070%	.0078%	.0075%	.0522%	.0516%	.0721%	.0566%	.0102%	.0101%	.0195%	.0172%
7/30/2021	.0280%	.0087%	.0086%	.0094%	.0078%	.5250%	.5237%	12.6882%	12.6720%	.0096%	.0093%	.2329%	.2314%
8/2/2021	.3513%	.0053%	.0049%	.0049%	.0048%	.0536%	.0513%	6.1259%	.0544%	.0111%	.0109%	.4445%	.3643%
8/3/2021	.0007%	.0068%	.0057%	.0113%	.0101%	.0903%	.0508%	.1371%	.0505%	.0534%	.0529%	.0355%	.0318%
8/4/2021	.0002%	.0083%	.0076%	.0107%	.0101%	.0504%	.0493%	.1052%	.0523%	.0075%	.0070%	.0203%	.0182%

Open Issues (2c)

FINRA CAT File Submission and Data Integrity 2c

Open Issues List – As of 8/10/2021

#	Status	Error Code	Summary	Resolution	Priority	Test Environment Targeted Release Date/Workaround	Production Environment Targeted Release Date/Workaround	Area
1	Open	N/A	Successful file delete submissions are incorrectly getting counted in the rejected files count in the statistics. Does not impact Compliance Error Rate.	Code Release	Low	2021	2021	Statistics
2	Open	N/A	FINRA CAT did not recognize the early close and improperly marked events that occurred between 1:15 and 4:15 pm ET and were reported by 8 am ET on the next CAT Trading Day as late events. Impact is limited to two days - 11/27/2020 & 12/24/2020.	Code Release	Low	2021	2021	Statistics
3	Open	N/A	File statistics screen is incorrectly displaying a blank integrity status in instances where the failure was due to a timeout or a duplicate file submission.	Code Release	Low	2021	2021	Reporter Portal
4	Open	N/A	Industry Members are intermittently experiencing a delayed display of file submissions and status in the File statistics screen on the Reporter Portal. This issue does not impact file feedback files.	Code Release	Low	2021	2021	Reporter Portal

FINRA CAT File Submission and Data Integrity 2c

Open Issues List – As of 8/10/2021

#	Status	Error Code	Summary	Resolution	Priority	Test Environment Targeted Release Date/Workaround	Production Environment Targeted Release Date/Workaround	Area
5	Open	2129	FINRA CAT is incorrectly accepting firmDetails with no firmDesignatedID populated on Fulfillment and Fulfillment Amendment Events.	Code Release	Low	2c: 10/11/2021	2c: 10/11/2021	Ingestion Validations
						2d: 10/11/2021	2d: 12/13/2021	
6	Open	2121 2122	FINRA CAT is incorrectly accepting clientDetails with no orderID populated on Fulfillment and Fulfillment Amendment Events.	Code Release	Low	2c: 10/11/2021	2c: 10/11/2021	Ingestion Validations
						2d: 10/11/2021	2d: 12/13/2021	
7	Open	2098 2060	FINRA CAT is incorrectly rejecting allocation events when the symbol was effective on the tradeDate but not effective on the event date on the allocation event.	Code Release	Medium	2c: 10/11/2021	2c: 10/11/2021	Ingestion Validations
						2d: 10/25/2021	2d: 12/13/2021	

FINRA CAT Linkage 2c

Open Issues List – As of 8/10/2021

#	Status	Error Code	Summary	Resolution	Priority	Test Environment Targeted Release Date/Workaround	Production Environment Targeted Release Date/Workaround	Area
1	Open	3504	FINRA CAT is generating an incorrect parent not found error for representative orders originated to aggregate other representative orders.	Code Release	Medium	Update: 8/10/2021	Update: 8/10/2021	Intrafirm Linkage Feedback
2	Open	N/A	Parent not found and Named errors that are reconciled continue to be displayed as 'U' (Unrepaired) in Error Summary & Error Search screens. Feedback & Reporting Summary statistics are not impacted by this issue.	Code Release	High	Update: Currently evaluating alternative approach	Update: Currently evaluating alternative approach	Error Summary & Error Search Reporter Portal
3	Open	3601	Out of Sequence Errors that are caused by an incorrect Time Stamp on the parent event are not being properly reconciled when the parent Time Stamp is corrected. Repaired counts and Adjusted Unlinked Rate are impacted by this issue.	Code Release	High	Update: 1Q 2022	Update: 1Q 2022	Intrafirm Statistics
4	Open	Multiple	Parent not found errors are being generated for open option orders when the option symbol changes due to corporate action.	Code Release	Low	Update: 2021 Note that this issue only impacts Options Intravenuue Exchange Errors	Update: 2021 Note that this issue only impacts Options Intravenuue Exchange Errors	Intrafirm Linker Feedback & Statistics

FINRA CAT Linkage 2c

Open Issues List – As of 8/10/2021

#	Status	Error Code	Summary	Resolution	Priority	Test Environment Targeted Release Date/Workaround	Production Environment Targeted Release Date/Workaround	Area
5	Open	9004 8004 7004 5004	FINRA CAT did not recognize the early close and improperly marked as unlinked, certain events that occurred between 1:15 and 4:15 pm ET and were reported by 8 am ET on the next CAT Trading Day. Any events that were marked as unlinked were automatically reconciled the following day. Impact is limited to two days - 11/27/2020 & 12/24/2020.	Code Release	Low	2021	2021	Interfirm Exchange Trade Linker Feedback
6	Open	396	FINRA CAT is incorrectly generating warnings on secondary events in instances where the parent DAY order was subsequently modified to a GTC order.	Code Release	Medium	2Q 2022	2Q 2022	Intrafirm Linker Feedback
7	Open	8003 8004 9003 9004 4003 5004	FINRA CAT is incorrectly generating an unlinked error for the first time on T+4 for previously linked events in scenarios when the two events that were initially linked occurred on two separate trade dates. For example, an order routed at 6 pm on one calendar day and is reported as accepted by the receiving firm at 8 am on the next calendar day.	Code Release	Medium	3Q 2021	3Q 2021	Interfirm & TRF Linker Feedback
8	Open	6003	Industry Members are incorrectly receiving options exchange unlinked errors for subsequent day order modifications/ adjustments to long lived orders previously routed to the exchange. Options exchanges must report modifications in these instances. Nine firms impacted.	N/A	Medium	3Q 2021	3Q 2021	Options Exchange Linker Feedback

FINRA CAT Linkage 2c

Open Issues List – As of 8/10/2021

#	Status	Error Code	Summary	Resolution	Priority	Test Environment Targeted Release Date/Workaround	Production Environment Targeted Release Date/Workaround	Area
9	NEW-Open	6003 7004 8003 8004 9003 9004	FINRA CAT is generating an incorrect unlinked error when the date portion of the Route Event timestamp is on a weekend and the date portion of the Modify Event timestamp is for the next business day.	Code Release	Low	9/24/2021	9/24/2021	Interfirm & Exchange Linkage Feedback

FINRA CAT Open Issues List 2c

Planned Enhancements

#	Status	Error Code	Summary	Resolution	Priority	Test Environment Targeted Release Date	Production Environment Targeted Release Date	Area
1	Open	2122	Incorrect error code is generated when an array field (e.g., clientDetails) is populated as a Name/Value pair.	Code Release	Low	To be scheduled	To be scheduled	Ingestion Validations
2	Open	2027	Incorrect error code is being generated when eventTimestamp is a future date (2027- eventTimestamp must be in the correct format instead of 2139 - eventTimestamp is greater than the current date and time).	Code Release	Low	To be scheduled	To be scheduled	Ingestion Validations
3	Open	2060	Enhance OSI symbol validations to accept symbols that are on the CAT Reportable Securities list even if event date is prior to effective date.	Code Release	Low	2c: 9/20/2021	2c: 9/20/2021	Ingestion Validations
						2d: 10/25/2021	2d: 12/13/2021	
4	Open	2101	Accept, rather than reject, routes to a foreign destination when the date in the name/value pair for timeInForce values of 'DAY' and 'GTX' is T+2 to accommodate orders routed on a foreign holiday.	Code Release	Low	2c: 10/11/2021	2c: 10/11/2021	Ingestion Validations
						2d: 10/11/2021	2d: 12/13/2021	

Open Issues (2d)

FINRA CAT File Submission and Data Integrity 2d

Open Issues List – As of 8/10/2021

#	Status	Error Code	Summary	Resolution	Priority	Test Environment Targeted Release Date/Workaround	Production Environment Targeted Release Date/Workaround	Area
1	NEW-Open	2110	FINRA CAT is incorrectly rejecting side details with no orderID and orderKeyDate on MOOT event.	Code Release	Medium	10/11/2021	Not Applicable	Ingestion Validations
2	NEW-Open	2145	FINRA CAT is incorrectly accepting firmDetails with no orderID populated on Fulfillment and Fulfillment Amendment Events in instances when the fulfillmentLinkType is 'OML'.	Code Release	Low	10/11/2021	Not Applicable	Ingestion Validations

FINRA CAT Linkage 2d

Open Issues List – As of 8/10/2021

#	Status	Error Code	Summary	Resolution	Priority	Test Environment Targeted Release Date/Workaround	Production Environment Targeted Release Date/Workaround	Area
1	NEW-Open	Multiple	FINRA CAT is not generating unlinked named errors when the unlinked error is originated from an exchange modification event.	Code Release	Low	8/23/2021	Not Applicable	Exchange Linkage Feedback

Technical Specification Updates– Validation Effective Dates

#	Status	Summary	Spec Publish Date	Spec Version	Validation Effective Date
1	Open	Add Error Code 6029 – Duplicate Exchange Trade Linkage Key.	8/2/2021	4.0.0 r10	8/2/2021
2	Open	Split Error Code 6025 into two error codes: <ul style="list-style-type: none"> • 6025 - side in <i>buyDetails</i> did not match • 6027 - side in <i>sellDetails</i> did not match 	8/2/2021	4.0.0 r10	8/2/2021
3	Open	Change the <i>TIDType</i> field from Required to Optional and note that <i>TIDType</i> may be required at a future date no sooner than July 11, 2022.	8/2/2021	4.0.0 r10	10/11/2021
4	Open	Remove <i>leavesQty</i> from Route Modification and Route Cancellation events.	8/2/2021	4.0.0 r10	10/11/2021
5	Open	Correct <i>priorOrderID</i> on MOOM event from Required to Conditional.	8/2/2021	4.0.0 r10	10/11/2021

Technical Specification Updates– Validation Effective Dates

#	Status	Summary	Spec Publish Date	Spec Version	Validation Effective Date
6	Open	Add <i>timeInForce</i> field to MOOMR and MLOMR to be consistent with MEOMR event.	8/2/2021	4.0.0 r10	10/11/2021
7	Open	Add <i>handlingInstructions</i> value 'LCE' (Lifecycle Completion Event).	8/2/2021	4.0.0 r10	10/11/2021
8	Open	Add <i>handlingInstructions</i> value 'PBG' (Price Based on Greeks).	8/2/2021	4.0.0 r10	10/11/2021
9	Open	Add supplement events for MEMR, MECR, MOMR, and MOCR to supplement the <i>routeRejectedFlag</i> . Clarify requirements for managing <i>routeRejectedFlag</i> on MLMR and MLCR events and use of MLOS event.	8/2/2021	4.0.0 r10	10/11/2021
10	Open	Clarify that <i>tradeDate</i> will be used to validate symbol validity on allocation events.	8/2/2021	4.0.0 r10	10/25/2021
11	Open	Update definitions of Error Codes 2060 and 2089 to state "Symbol is not Valid".	8/2/2021	4.0.0 r10	10/25/2021

SIFMA Test

2021 CAT SIFMA Test

- ▶ FINRA CAT and selected CAT Reporters will participate in the 2021 SIFMA test
- ▶ Selected CAT Reporters have been notified
- ▶ FINRA CAT plans to use its Enhanced Disaster Recovery Environment (EDR) in AWS East-2 Region
- ▶ Some Environments in the East 1 and East 2-EDR will be unavailable between October 21 and October 26, 2021
- ▶ For more details, please see the [July 13, 2021 Industry Testing Checkpoint Call](#)

General Announcements and Reminders

Announcements

- Technical Specifications:
 - Updated Phase 2d Tech Spec (v4.0.0 r10) was published on August 2, 2021
 - Updates were highlighted during the August 3, 2021 CAT Technical Specification Working Group (recording and presentation are posted to www.catnmsplan.com)
 - Corresponding Schema for v4.0.0 r10 was published on August 2, 2021
- Updated Phase 2d Reporting Scenarios were published on July 16, 2021
- Industry Members are invited to participate in the 2021 Business Clock Synchronization Survey
 - Please see the banner on www.catnmsplan.com for more information
 - The Survey closes on September 10, 2021
- The Onboarding Guide was updated to reflect the new Account Management System for entitlement, which was effective August 1, 2021

Other General Reminders

- Recordings and presentations from the following webinars are posted to www.catnmsplan.com
 - Multi-Leg/Complex Option Order Webinar (July 21, 2021)
 - Monthly CAT Implementation Update and FINRA (SRO) Status Update on OATS Retirement (July 15, 2021)

Upcoming Webinars

- August 19, 2021 at 4:15 ET: Monthly CAT Implementation Update. FINRA (SRO) will provide an update on the status of OATS retirement.
- September 14, 2021 at 10:00 am ET: Phase 2d Cutover Webinar, which will focus on the transition from Phase 2c to Phase 2d CAT reporting as it relates to schema changes, timing, reporting requirements and other related items.
- The Industry Testing Checkpoint Call will move back to a bi-weekly schedule starting on Tuesday, September 14 at 4:15 pm.

Upcoming Key Dates

Upcoming Key Dates for Phase 2d

Topic	Event	Date
Industry Call: Industry Testing Checkpoint	Periodic Industry Testing Checkpoint Calls – Designated Tuesdays at 4:15 pm (ET)	January 7, 2020 until further notice
Compliance Go-Live	Production Go-Live for Phase 2d reporting requirements	December 13, 2021

Phase 2d Updates

Industry Member 2d Release Rollout

Release 2d1
Industry Test – 6/28/2021

Ingestion

Industry Test Open for Machine-to-Machine File & Data Integrity Validations & Feedback

- Syntax Validations
- Conditional Validations

CAT Reporter Portal

- Manual File Upload
- Reporting Summary Statistics

Release 2d2
Industry Test – 7/19/2021

Intrafirm Linkage

Industry Test Open for Machine-to-Machine Intrafirm Linkage Validations & Feedback

- Reference Data Validations on *senderIMID*, *receiverIMID*, *destination* and *legDetails* OptionID/Symbol

CAT Reporter Portal

- Linkage File feedback
- Linkage Statistics
- Error Summary and Error Search including Error Correction
- Direct Data Entry

Release 2d3
Industry Test – 8/2/2021

Interfirm Linkage

Industry Test Open for Machine-to-Machine Interfirm/Exchange Linkage Validations & Feedback

- Interfirm Quote Linkage
- Interfirm/Exchange linkage for Route Modification Events including Unlinked feedback for Routed Order ID Mismatch
- Firm to Exchange Trade Linkage for MOOT Events

CAT Reporter Portal

- Support Clearing Firm View of Correspondent Reporting Feedback submitted by Third-Party Vendor

Release 2d4
Industry Test – 8/23/2021

Multi-leg Linkage

Industry Test Open for Machine-to-Machine Multi-leg Linkage Validations & Feedback

- Interfirm & Exchange for Multi-leg Events
- Intrafirm Out of Sequence checks

CAT Reporter Portal

- Reconciliation Statistics
- Counterparty Statistics for MOOT linkages

2d Go-live
Production – 12/13/2021

Ingestion & All Linkage

Production Open for Machine-to-Machine File, Data Integrity and **All** Linkage Validations & Feedback

CAT Reporter Portal

- Manual File Upload
- Reporting Summary Statistics including reconciliation
- Counterparty Statistics for MOOT linkages
- Linkage File Feedback
- Error Summary and Error Search including Error Correction
- Direct Data Entry
- Support Clearing Firm View of Correspondent Reporting Feedback submitted by Third-Party Vendor

Phase 2d Compliance Date – 12/13/2021

2d Statistics & Observations

As of August 3, 2021

- Total **337** Unique Firms in Industry Test
- Total **71** Unique Submitters in Industry Test
- Overall File Rejection Rate is **10.89%**
- Approximately **15.55%** of submissions are New 2d Events; **0.37%** of submissions are Multi-leg Events
- Most of the Unlinked Interfirm, Exchange and Trade are due to:
 - Not all firms reporting in Test Environment
 - Firms reporting test symbols that are matched with production data for Exchange and Trade Linkage

Equities – Rolling Five Day Period (Industry Test)

Initial T+1 vs. T+5 8 am Data Ready for Regulators

July 22, 2021 – August 3, 2021

Trade Date	Late%	Rejection Initial	Rejection Adjusted	Intrafirm Initial	Intrafirm Adjusted	Interfirm Sent Initial	Interfirm Sent Adjusted	Interfirm Received Initial	Interfirm Received Adjusted	Exchange Initial	Exchange Adjusted	TRF Initial	TRF Adjusted
7/22/2021	1.4731%	1.2711%	1.2711%	.0130%	.0130%								
7/23/2021	1.4969%	.7730%	.7730%	.0418%	.0418%								
7/26/2021	.0150%	.2068%	.2068%	.0147%	.0147%								
7/27/2021	.3954%	.2236%	.2236%	.2802%	.2802%								
7/28/2021	.0010%	.1284%	.1284%	.0041%	.0041%								
7/29/2021	69.1296%	.1397%	.1397%	.0080%	.0080%								
7/30/2021	8.4728%	.3228%	.3228%	.5967%	.5967%								
8/2/2021	.0369%	.0394%	.0394%	.0014%	.0014%	84.3592%	84.3591%	7.3462%	7.3462%	9.0089%	9.0089%	86.8320%	86.8320%
8/3/2021	.3803%	.0983%	.0983%	.0019%	.0019%	82.4575%	82.4574%	6.2646%	6.2646%	10.1874%	10.1874%	58.6007%	58.5948%

Interfirm, Exchange and TRF Linkage available in Industry Test starting 8/2/2021.

Options – Rolling Five Day Period (Industry Test)

Initial T+1 vs. T+5 8 am Data Ready for Regulators

July 22, 2021 – August 3, 2021

Trade Date	Late%	Rejection Initial	Rejection Adjusted	Intrafirm Initial	Intrafirm Adjusted	Interfirm Sent Initial	Interfirm Sent Adjusted	Interfirm Received Initial	Interfirm Received Adjusted	Trade Initial	Trade Adjusted
7/22/2021	1.7324%	11.1399%	11.1399%	10.7722%	10.7722%						
7/23/2021	.0014%	10.9554%	10.9554%	9.0092%	9.0092%						
7/26/2021	.0248%	4.4220%	4.4220%	2.6619%	2.6619%						
7/27/2021	7.3125%	4.0226%	4.0226%	3.4387%	3.4387%						
7/28/2021	.0000%	4.4903%	4.4903%	5.4311%	5.4311%						
7/29/2021	.0001%	4.3905%	4.3905%	5.6383%	5.6383%						
7/30/2021	.0027%	.8773%	.8773%	4.1350%	4.1350%						
8/2/2021	.0266%	1.0234%	1.0234%	1.7302%	1.7302%	.8346%	.8346%	13.8511%	13.8511%	24.4756%	24.4756%
8/3/2021	61.7742%	4.5581%	4.5581%	3.2610%	3.2610%	.7117%	.7117%	12.6940%	12.6940%	25.4227%	25.4227%

Interfirm, Exchange and TRF Linkage available in Industry Test starting 8/2/2021.

Enhanced Linkage Feedback Files – Linkage Key

- The CAT derived linkage key used to attempt linkage on the event is included as the last field in the linkage feedback files
- If a record has more than one error, both linkage keys are delivered separated by a ‘@’ sign
- Linkage Key Reference – Table 5 section 2.6.1 (Intrafirm) and Table 7 section 2.6.3 (Interfirm, Exchange and Trade)

Type of Linkage	Linkage Key(s)	Example
Intrafirm	orderKeyDate CATReporterIMID CAT Derived Issue ID orderID	2021-07-30 10:13:34.263236000 ZZZT1 26397 ORDERID123
Interfirm	Date portion of eventTimestamp senderIMID receiverIMID CAT Derived Issue ID routedOrderID	2021-07-30 99999999:ZZZT1 88888888:ABCD1 39606 RTDODR123
Exchange	Date portion of eventTimestamp senderIMID destination CAT Derived Issue ID routedOrderID session	2021-08-04 99999999:ZZZT1 EXCH1 73493 RTDODR456 SSSN1
TRF	Date portion of eventTimestamp CATReporterIMID CAT Derived Issue ID tapeTradeID marketCenterID	2021-08-04 ZZZT1 26397 TAPETRDID123 MKTCENTER1
Multiple (For Example Intrafirm & Interfirm)	orderKeyDate CATReporterIMID CAT Derived Issue ID orderID@ Date portion of eventTimestamp senderIMID receiverIMID CAT Derived Issue ID routedOrderID	2021-07-30 10:13:34.263236000 ZZZT1 26397 ORDERID123@ 2021-07-30 99999999:ZZZT1 88888888:ABCD1 39606 RTDODR123

Phase 2d Cutover Resources

- The Appendix of this presentation, Phase 2d Cutover: Schema Changes.
- On June 24, 2021, FINRA CAT published CAT Alert 2021-03-Phase 2d: Transitioning from Phase 2c and Coordinated Industry Tests.
- On Tuesday, September 14, 2021 at 10:00 am ET, Consolidated Audit Trail, LLC and FINRA CAT, LLC will host an industry webinar focused on the transition from Phase 2c to Phase 2d CAT reporting as it relates to schema changes, timing, reporting requirements and other related items.

Phase 2d Coordinated Industry Test

- FINRA CAT will facilitate six coordinated industry tests.
- Participation in the industry tests is optional, but all Industry Members are encouraged to participate.
- Industry Members may participate in one or more industry tests.
- The first coordinated industry test commences with CAT Trading Day September 10, 2021.
 - Industry Members are encouraged to submit a full day of production data to the Test Environment by 8 am on September 13, 2021.
 - FINRA CAT will perform intrafirm, interfirm and exchange linkage on Phase 2d reporting requirements and provide feedback.
 - FINRA CAT will post a list of participating CAT Reporter IMIDs in both machine-readable and human-readable formats to the Reference Data page of www.catnmsplan.com by 9 am on September 15, 2021. Industry Members and CAT Reporting Agents should use this list to determine if any interfirm unlinked errors were caused by breaks in the linkage key or contra non-participation.

Key Dates for Coordinated Industry Tests

<u>Test Number</u>	CAT Trading Day of the Coordinated Industry Test	Data Due to Industry Test	List of Participating IMIDs Posted as Reference Data on the CAT Website
1	9/10/21	By 8 am on 9/13/21	By 9 am on 9/15/21
2	10/1/21	By 8 am on 10/4/21	By 9 am on 10/6/21
3	10/15/21	By 8 am on 10/18/21	By 9 am on 10/20/21
4	10/29/21	By 8 am on 11/1/21	By 9 am on 11/3/21
5	11/12/21	By 8 am on 11/15/21	By 9 am on 11/17/21
6	11/26/21	By 8 am on 11/29/21	By 9 am on 12/1/21

FINRA CAT Helpdesk

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

How to Ask a Question during Today's Call

- **For participants using computer audio:**
 - Click the “Raise Hand” button at the bottom of the participant's 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.

Appendix

Transition Support: Schema Changes to Existing Phase 2c Events

The following slides include schema changes to existing Phase 2c events that become effective with Phase 2d reporting.

This information does not include new events types that are defined for Phase 2d.

Changes to Existing Phase 2c Events

Event Type Code	Change Description	Seq# and Field Name
MENO	New conditional field added	46. netPrice
MEOR	New required field added	32. multiLegInd
	New conditional field added	33. pairedOrderID
	New conditional field added	34. infoBarrierID
	New conditional field added	35. netPrice
	New conditional field added	36. quoteKeyDate
	New conditional field added	37. quoteID
MEIR	New required field added	26. multiLegInd
	New conditional field added	27. netPrice
MEIM	New conditional field added	28. requestTimestamp
	New conditional field added	29. netPrice
MEIC	New conditional field added	16. requestTimestamp
	New conditional field added	17. infoBarrierID
MECO	New required field added	32. multiLegInd
	New conditional field added	33. infoBarrierID
	New conditional field added	34. netPrice

Changes to Existing Phase 2c Events

Event Type Code	Change Description	Seq# and Field Name
MECOM	New conditional field added	33. netPrice
MEOM	New conditional field added to <i>reserved for future</i> use position	22. requestTimestamp
	New conditional field added	53. netPrice
MEOMR	New conditional field added	43. netPrice
MEOJ	New conditional field added	32. netPrice
MEOC	New conditional field added	17. requestTimestamp
	New conditional field added	18. infoBarrierID
MEOCR	New conditional field added	15. infoBarrierID
MENQ	New required field added	27. manualFlag
	New conditional field added	28. electronicTimestamp
MEQR	New required field added	25. dupROIDCond
	New required field added	26. manualFlag
	New conditional field added	27. electronicTimestamp
MEQC	New required field added	15. manualFlag
	New conditional field added	16. electronicTimestamp

Changes to Existing Phase 2c Events

Event Type Code	Change Description	Seq# and Field Name
MEOT	New required field added	35. multiLegInd
	New conditional field added	36. infoBarrierID
MEOTS	New required field added	12. multiLegInd
MEOF	New conditional field added	20. infoBarrierID
MEPA	New optional field added	25. TIDType
MEAA	New optional field added	27. TIDType
MEOE	New conditional field added	33. netPrice
MONO	New required field added to <i>reserved for future</i> use position	28. solicitationFlag
	New conditional field added	32. RFQID
	New conditional field added	33. netPrice
MOOR	New required field added to <i>reserved for future</i> use position	30. multiLegInd
	New conditional field added	34. pairedOrderID
	New conditional field added	35. netPrice

Changes to Existing Phase 2c Events

Event Type Code	Change Description	Seq# and Field Name
MOOA	New required field added to <i>reserved for future</i> use position	29. solicitationFlag
	New conditional field added to <i>reserved for future</i> use position	30. pairedOrderID
	New conditional field added	34. netPrice
MOIR	New required field added	28. multiLegInd
	New conditional field added	29. netPrice
MOCO	New required field added	24. multiLegInd
	New conditional field added	25. netPrice
MOCOM	New conditional field added	25. netPrice
MOOM	New conditional field added to <i>reserved for future</i> use position	33. requestTimestamp
	New conditional field added	39. netPrice
	Field change to Conditional	10. priorOrderID
MOOJ	New required field added to	22. timeInForce
	New conditional field added	23. netPrice
MOOC	New conditional field added	17. requestTimestamp

Changes to Allowed Values

Field Name	Allowed Values Added	Allowed Values Removed
handlingInstructions	AIP, CASH, CTR, GP, NCTR, OCP, OFF, QCC, TTU, DLVF, DLVT, PBG , LCE	CNH, GVWAP, J3, SR, SMT
marketCenterID	ARCAOP, AMEROP, BOX, BZXOP, C2, CBOE, CHX, EDGXOP, EMLD, GEMX, ISE, MIAMI, MRX, NOBO, NOM, PEARL, PHLX	
allocationType	AVP, CMTA	FCUS, FDVP, FCSF, FDVF
timeInForce	GFD	
representativeInd	OS, OML, OMS	
fulfillmentLinkType	OS, OML	
side	S	

New Validations for Existing 2c Events

Field Name	Validations	Applicable Event Types
receivedQuoteID	receivedQuoteID must be populated when manualFlag is false.	MEQR
netPrice	If netPrice is populated, the price must be blank or zero	MENO,MEOR,MEOA,MEIR,MEIM,MECO,MECOM,MEOM,MEOJ,MEOE,MONO,MOOR,MOOA,MOCO,MOOM,MOOJ
aggregatedOrders	The aggregatedOrders must be populated when representativeInd = 'O'. The aggregatedOrders is optional when representativeInd = 'OS'	MONO, MOOM
firmDetails	The firmDetails must be populated if fulfilmentLinkType is in ('O'). The firmDetails must not be populated if fulfilmentLinkType is in ('OS')	MOOF
seqNum	Must be populated	MEQR
routeRejectedFlag	Must be populated	MOOR

Changes to Existing Phase 2c Events – Retired Fields

Event Type Code	Key	Event
quoteKeyDate	Optional	MEOT
quoteID	Optional	MEOT
quotingIDQS	Optional	MEOT
<Side Details>.quantity	Required	MEFA, MOFA
	Optional	MEOT, MEOF, MOOF
custType	Optional	MEPA, MEAA
priorUnlinked	Conditional	MONOS, MOIR, MOOC, MOCOC, MOOJ, MOCOM, MOOR, MOOA, MOOM, MOOF, MOFA, MOCO
nextUnlinked	Conditional	MONOS, MOIR, MOOJ, MOCOM, MONO, MOOR, MOOA, MOOM, MOCO