CAT Industry Member Reporting Scenarios

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Executive Summary

This document is a companion document to the [CAT Reporting Technical Specifications for Industry Members ("Technical Specifications")](#) and is provided to assist Industry Members in implementing the reporting requirements laid out in the Technical Specifications. This document illustrates the specific reporting requirements for a variety of order handling execution scenarios for both equities and options Eligible Securities (as defined in the CAT NMS Plan). The scenarios illustrate the reporting requirements for Phases 2a and 2b. Additional scenarios will be added for Phases 2c and 2d when the Technical Specifications are published for those phases.

The reporting scenarios are presented in a separate document from the Technical Specifications to provide the greatest flexibility in the ability to modify or add scenarios as new questions are presented and trading practices evolve. It is expected that changes and additions will be necessary for reporting scenarios with greater frequency than changes to the Technical Specifications that would be required when record format, field value changes, etc., occur. By maintaining a separate reporting scenarios document, reporting scenarios may be clarified or added without the need for a new version of the Technical Specifications.

This document contains interpretive guidance for Industry Member CAT Reporters with respect to how the Technical Specifications must be implemented. As such, any changes to this document are subject to the same review and approval process by the Operating Committee, pursuant to the CAT NMS Plan, as the Technical Specifications.

This document represents a phased approach to industry reporting. Please note that a proposed amendment to the CAT NMS Plan will be filed with the Securities and Exchange Commission ("Commission") to reflect the phased approach for the Industry Member CAT reporting described in the Technical Specifications. The proposed amendment will be subject to the approval of the Commission.

Version	Date	Author	Description
1.0	10/30/2018	Thesys CAT	Initial Publication
1.01	2/22/19	CAT NMS, LLC	Re-publish v1.0 (as v1.01) to reflect transition from Thesys CAT
1.1 DRAFT 1	2/28/19	CAT NMS, LLC	Made conforming changes with v1.1 of the IM Technical Specifications Order Events Document
			Removed options representative order scenarios (previously scenarios 3.2.1 and 3.5.3)
			Updated Scenario 2.4.5 with new FAQ number
			Updated Scenario 2.6.6 to reflect an exchange route in Step 3
1.1 DRAFT 2	3/29/2019	CAT NMS, LLC	Moved existing ATS Scenarios to Section 2.6
			Moved existing OTC Scenarios to Section 2.7

Version	Date	Author	Description
			Added Scenarios 2.6.1, 2.6.4, 2.6.5, 2.7.2, 2.7.3, and 3.2.2
			Removed scenario 2.2.5
			Changed Scenario 2.7.1 (previously 2.2.4)
			Updated Scenario 2.2.1 description to remove reference to Step 10
			Updated Scenario 2.3.1 description to reflect Riskless Principal capacity
			Updated Scenario 2.4.4 to remove handlingInstructions SMT in Steps 3 and 4
			Updated Scenario 2.8.2 (previously 2.6.2) to reflect a route form Broker 1 in Step 3
			Updated Scenario 2.6.2 (previously Scenario 2.2.3) to reflect the correct leaves quantity in Step 9
			Updated Scenario 2.6.3 (Previously 2.4.5) to remove Display ATS from the title
			Updated Scenario 2.6.6 (previously Scenario 2.4.6) to reflect the correct quantity in Step 6
2.0	4/29/2019	CAT NMS, LLC	Made conforming changes with V1.1 of the IM Technical Specifications Order Events Document
			Added New Section 4
			Added Scenarios 2.1.6, 2.4.6 and 2.8.3
			Changed scenario 2.8.2 (Previously 2.6.2)
			Removed Scenario 3.2.1
			Updated Scenario 2.6.1 to reflect multiple modifications
			Created Section 2.4 for Representative Order scenarios
			Created Section 2.5 for Internal Route scenarios
			Created Section 2.10 for Electronic Duplicate scenarios
			Created Section 2.11 for Child Order scenarios
			Created Section 2.12 for Clearing Firm scenarios
			Created Section 3.5 for Option Internal Route and Child Order scenarios
			Created Section 3.6 for Complex Option Order scenarios
			Re-aligned existing scenarios within new and existing sections
			Updated Capacity in scenario 2.13.2 (previously 2.8.10)
			Corrected JSON and CSV examples in Section 2.12 (previously section 2.9)
			Corrected errors within the document
2.1	6/24/2019	CAT NMS, LLC	Made conforming changes with V2.2 of the IM Technical Specifications
			Corrected errors within the document
			Added and Updated Hyperlinks
			Added new Section 4 for Error Account Scenarios
			Added new Section 5 for FDID Scenarios
			Added new Section 2.9 for Foreign Scenarios
			Added Scenarios 2.2.3, 2.3.3, 2.3.8
			Removed Section 2.3 for Order Fulfillment Scenarios

Version	Date	Author	Description
			Moved scenario 2.3.1 to 2.9.1
			Changed Scenario 2.3.2 and moved to 2.13.5
			Changed Scenario 2.3.6 (Previously 2.4.5)
			Updated requirements for Scenarios 2.10.2 and 2.10.3
			Clarified requirements for Scenario 2.1.5
2.2	7/31/19	CAT NMS, LLC	Corrected errors within the document
			Added Scenarios 2.5.8, 2.5.9, 2.6.3, 2.6.5, 2.6.6, 2.6.7, 4.1.4, 4.1.5, 4.1.7, and 5.1.2
			Updated Scenarios 2.5.1 and 2.6.2
			Re-Named Scenario 2.6.4 (Previously 2.6.3)
			Clarified guidance in Scenario 2.2.2
			Clarified guidance in Scenario 5.1.1
2.3	8/30/19	Consolidated Audit Trail, LLC	Made conforming changes with V2.2.1 of the IM Technical Specifications
			Added Section 2.12 for Proprietary Order Scenarios
			Added Scenarios 2.3.9, 2.3.10, 2.4.6 and 2.4.7
			Corrected errors within the document
			Corrected guidance in Scenario 2.3.6
			Updated Requirements for Scenario 2.8.3
			Updated Requirements for Scenario 2.6.7
			Clarified requirements for Scenario 2.3.5
			Clarified requirements for Scenario 2.9.3
2.4	10/11/19	Consolidated Audit Trail, LLC	Corrected errors within the document
			Added Section 2.14 for NYSE Floor Broker Scenarios
			Clarified requirements for Scenarios 2.3.1, 2.4.6, 2.4.7, 2.9.1, 2.9.2, 2.9.3 and 2.12.1.
2.5	2/12/2020	Consolidated Audit Trail, LLC	Corrected errors within the document
			Added clarification to Introduction.
			Added additional clarification to section 2.11 regarding Child Orders.
			Added Scenarios 2.2.4, 2.6.8, 2.8.4, 2.8.5, 2.12.3.
			Added new Section 7 for Floor Broker scenarios, moved section 2.14 to Section 7.1, and added section 7.2 for CBOE Floor Broker Scenarios.
			Changed Section 2.14 to Fractional Share Scenarios.
			Moved Scenario 2.15.2 to 2.14.5.
			Clarified requirements in Scenario 2.15.3 (Previously 2.15.4).

1. Introduction

This document is organized by product, and then within each product, by general handling scenario, such as order receipt and routing, order execution, etc.

For each scenario, a description of the scenario along with a diagram is provided and then is followed by specific Event Reports illustrating the correct values to be populated for each field. All examples are illustrative and do not identify all applicable fields.

2.   Equity Scenarios and Examples

This section illustrates sample equity reporting scenarios. Each scenario will include a brief description including the reportable CAT events, a flow chart, and step-by-step reporting responsibilities. Refer to Section 4 of the CAT Reporting Technical Specifications for Industry Members for additional information.

2.1.   Order Route Scenarios

This section illustrates the CAT reporting requirements when an order is received or originated, and is subsequently routed away from the firm for execution. Refer to Section 4.3 of the CAT Reporting Technical Specifications for Industry Members for additional information.

2.1.1.   New Principal Order Routed to an Exchange and Executed

This scenario illustrates the CAT reporting requirements when an Industry Member originates a new principal order, routes the order to an exchange, and the order is executed on the exchange.
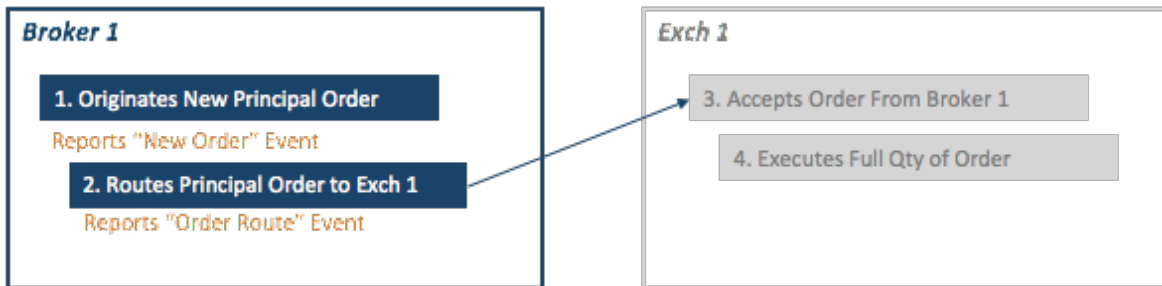
Industry Member Broker 1 is required to report:

·   The origination of a principal order (New Order event)
·   The route to an exchange (Order Route event)

The execution will be reported by the exchange.

#	Step	Reported Event	Comments
1	Broker 1 originates a New Order	Broker 1 reports a New Order event type: MENO orderKeyDate: 20180501T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 manualFlag: false deptType: T side: B price: 10.00 quantity: 1000 orderType: LMT	

#	Step	Reported Event	Comments
		timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PRO001 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Broker 1 routes the order to Exch 1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234556 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA	Since Broker 1 is routing to a national securities exchange, *session* must be populated.
3	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
4	Exch 1 executes the full quantity of the order	*Exch 1 reports a Participant **Trade event***	

2.1.2.   Customer Order Routed to an Exchange as Agent

This scenario illustrates the CAT reporting requirements when an Industry Member routes a customer order to an exchange on an agency basis.
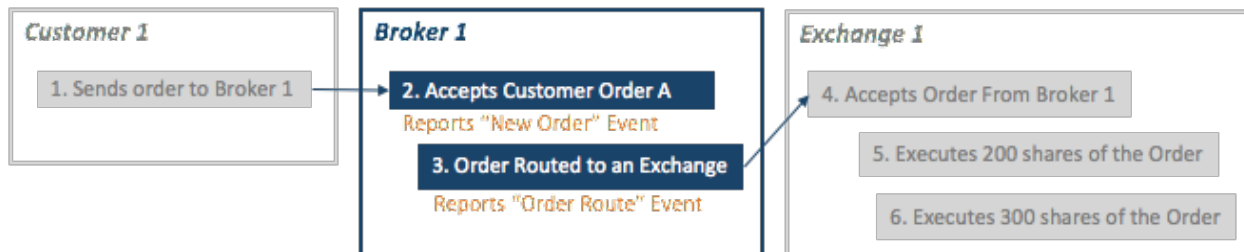
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the customer order to the exchange (Order Route event)

In this scenario, since the execution is passed back directly to the customer, no Order Fulfillment event is required to be reported.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to exchange EXCH1	Broker 1 (IMID = FRMA) reports an ***Order Route event*** type: MEOR orderKeyDate: 20180417T000000	Since Broker 1 is routing to a national securities exchange, *session* must be populated. In phase 2c, since the values in the *handlingInstructions* field have not changed from the New Order to the

#	Step	Reported Event	Comments
		orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234556 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: s5 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	Order Route, Broker 1 may use a value of "RAR" in the *handlingInstructions* field to indicate the order was "routed as received"*.* Alternatively, firms have the option to re-state all *handlingInstructions* values.
4	The Exchange accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	
5	The Exchange executes a partial quantity (200) of the order	*EXCH1 reports a Participant **Trade event***	
6	The Exchange executes a partial quantity (300) of the order	*EXCH1 reports a Participant **Trade event***	

2.1.3. Order Routed between Two Industry Members and Subsequently Executed on an Exchange

This scenario illustrates the CAT reporting requirements when an order is routed from one Industry Member to another prior to execution on an Exchange.
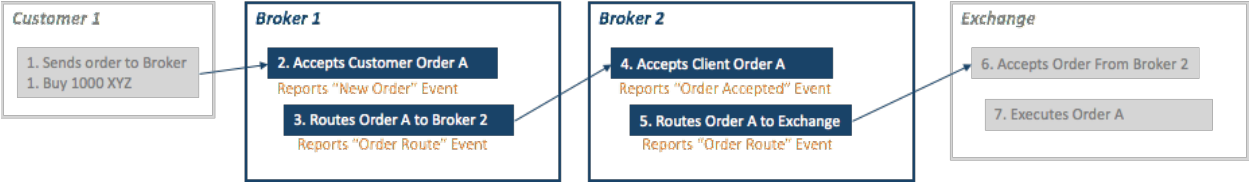
Industry Member Broker 1 is required to report:

· The receipt of the customer order (New Order event)

· The route of the customer order to Broker 2 (Order Route event)

Industry Member Broker 2 is required to report:

- · The receipt of the order from Broker 1 (Order Accepted event)
- · The route of Broker 1's order to the exchange (Order Route event)

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153030.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153031.234556 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: AO222 side: B price: 10.00 quantity: 1000	

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
4	Broker 2 accepts the order from Broker 1	Broker 2 reports an ***Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T1543031.323556 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: AO222 affiliateFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Broker 2 routes the order to exchange EXCH1	Broker 2 reports an ***Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T1543031.324556 manualFlag: false senderIMID: FRMB destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: Es6:AA side: B price: 10.00	Since Broker 2 is routing the order to a national securities exchange, *session* must be populated.

#	Step	Reported Event	Comments
		quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
6	The Exchange accepts the order from Broker 2	*EXCH1 reports a Participant **Order Accepted event***	
7	The Exchange executes the order	*EXCH1 reports a Participant **Trade event***	

2.1.4. Order Routed to Multiple Destinations and Filled

This scenario illustrates the CAT reporting requirements when a customer order is routed to multiple destinations. In this scenario, the order is partially routed to another Industry Member followed by an exchange, and is partially routed to an ATS.
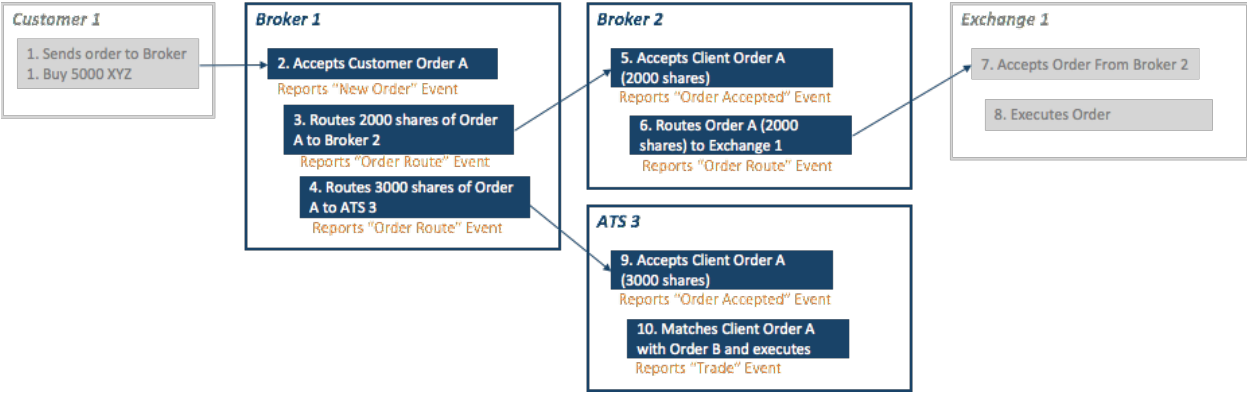
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The route to Broker 2 (Order Route event)
- · The route to ATS 3 (Order Route event)

Industry Member Broker 2 is required to report:

- · The receipt of the order from Broker 1 (Order Accepted event)
- · The route to Exchange 1 (Order Route event)

Industry Member ATS 3 is required to report:

- · The receipt of the order from Broker 1 (Order Accepted event)
- · The matching and execution of Broker 1's order (Trade event)

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS002 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153035.234556 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: ABO4561 side: B price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	

#	Step	Reported Event	Comments
4	Broker 1 routes the order to ATS 3	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000.0000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153035.234556 manualFlag: false senderIMID: FRMA destination: ATSC destinationType: F routedOrderID: ACO4562 side: B price: 10.00 quantity: 3000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
5	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O21234 symbol: XYZ eventTimestamp: 20180417T153035.334556 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: ABO4561 affiliateFlag: false deptType: A side: B price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA	

#	Step	Reported Event	Comments
		custDspIntrFlag: false	
6	Broker 2 routes the order to Exchange 1	*Broker 2 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O21234 symbol: XYZ eventTimestamp: 20180417T153035.334656 manualFlag: false senderIMID: FRMB destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: s5 side: B price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	Since Broker 2 is routing the order to a national securities exchange, *session* must be populated.
7	Exchange 1 accepts the order from Broker 2	*EXCH1 reports a Participant **Order Accepted event***	
8	Exchange 1 executes the order	*EXCH1 reports a Participant **Trade event***	
9	ATS 3 accepts the order from Broker 1	*ATS 3 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O31235 symbol: XYZ eventTimestamp: 20180417T153035.334557 manualFlag: false receiverIMID: ATSC senderIMID: FRMA senderType: F routedOrderID: ACO4562 affiliateFlag: false deptType: A side: B	

#	Step	Reported Event	Comments
		price: 10.00 quantity: 3000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false seqNum: 10987 atsDisplayInd: N displayPrice: 0 workingPrice: 10.02 displayQty: 0 atsOrderType: Fb nbbPrice: 9.99 nboPrice:10.02 nbboSource: S nbboTimestamp: 20180417T153035.334527	
10	ATS 3 matches Broker 1's order with a sell order (ID: 21945)	*ATS 3 reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: T4562111 symbol: XYZ eventTimestamp: 20180417T153035.334657 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 3000 price: 10.00 capacity: A tapeTradeID: TP12345 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: O31235 side: B sellDetails: orderKeyDate: 20180417T000000 orderID: 21945 side: SL seqNum: 12007 nbbPrice: 10.00	

#	Step	Reported Event	Comments
		nboPrice: 10.02 nbboSource: S nbboTimestamp: 20180417T153035.334457	

2.1.5. Order Routed from an Exchange through a Routing Broker

This scenario illustrates the CAT reporting requirements when an exchange routes an order through its affiliated Industry Member routing broker to another exchange.
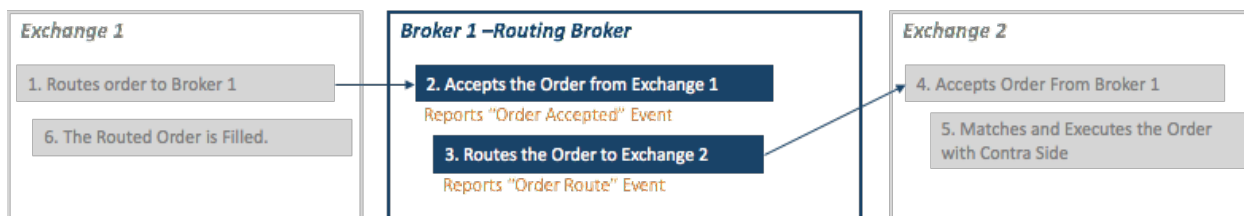
Industry Member Broker 1 is required to report:

- The receipt of the order from Exchange 1 (Order Accepted event)
- The route of the order to Exchange 2 (Order Route event)

Exchange 1 is required to report the following as outlined in the CAT Reporting Technical Specifications for Plan Participants:

- The route of the order to its routing broker (Participant Route event)
- The fill of the routed order (Participant Fill event)

Exchange 2 is required to report the following as outlined in the CAT Reporting Technical Specifications for Plan Participants:

- The receipt of the order from Broker 1 (Participant Order Accepted event)
- Matching and execution of Broker 1's order (Participant Trade event)

In the event that Broker 1 routes the order to another broker-dealer as opposed to an exchange, Broker 1 would report an Order Accepted event and Order Route event as outlined above, with the Order Route event reflecting a route to another broker-dealer. The broker-dealer receiving the order from Broker 1 would report an Order Accepted event, along with any subsequent actions on the order.

#	Step	Reported Event	Comments
1	Exchange 1 routes an order to its routing broker, Broker 1.	*Exchange 1 reports a Participant* ***Route event***	

#	Step	Reported Event	Comments
2	Broker 1 accepts the order from Exchange 1	*Broker 1 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.234456 manualFlag: false receiverIMID: FIRM1 senderIMID: Exch1 senderType: E routedOrderID: S2O12345 affiliateFlag: true deptType: A side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA custDspIntrFlag: false	
3	Broker 1 routes the order to Exchange 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143031.234456 manualFlag: false senderIMID: FIRM1 destination: Exch2 destinationType: E routedOrderID: S9O12345 session: 1109 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false	Since Broker 1 is routing the order to a national securities exchange, *session* must be populated.

#	Step	Reported Event	Comments
		isoInd: NA	
4	Exchange 2 receives the order from Broker 1	*Exchange 2 reports a Participant **Order Accepted event***	
5	Exchange 2 crosses Broker 1's order	*Exchange 2 reports a Participant **Trade event***	
6	Exchange 1 receives the fill	*Exchange 1 reports a Participant **Fill Event***	

2.1.6. Customer Order Facilitated via a Firm Agency Account Where a Route can be Directly Associated with the Customer Order

This scenario illustrates the CAT reporting requirements when an Industry Member facilitates a single customer order via a firm agency account, commonly referred to as an "agency flip" scenario.

In this example, the Industry Member receives a customer order and then generates a firm order in its agency account, which is sent to the market. In this instance, the Industry Member's order handling and/or reporting system allows the route sent to the street to be directly associated with the customer order. Since the firm's system maintains the direct association between the customer order and the actions taken to facilitate that order, the firm is not required to report a separate representative order.
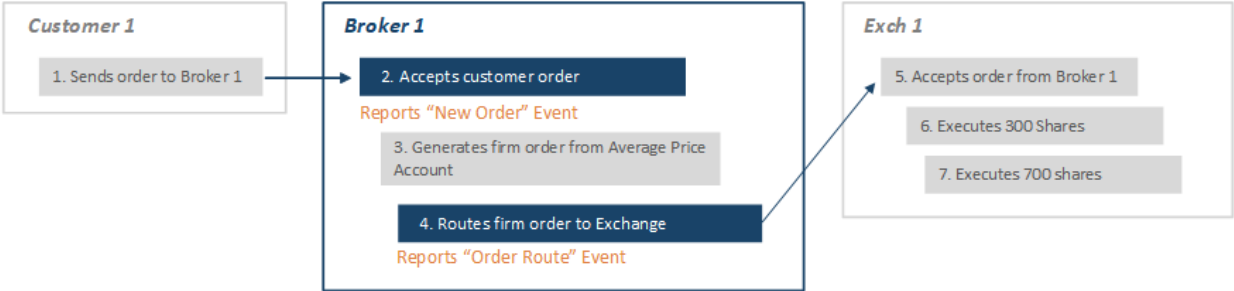
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the order from its agency account (Order Route event)

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	

#	Step	Reported Event	Comments
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 21 generates a firm order	*N/A*	Since the Industry Member's system maintains a direct association between the customer order and the route sent to the street on behalf of the customer, a representative order is not required.
4	Broker 1 routes the order to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180417T153036.234556 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: s5 side: B price: 10.00 quantity: 1000 orderType: LMT	

#	Step	Reported Event	Comments
		timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
5	The Exchange accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	
6	The Exchange partially executes the order (300 shares)	*EXCH1 reports a Participant **Trade event***	
7	The Exchange executes the remainder of the order (700 shares)	*EXCH1 reports a Participant **Trade event***	

2.2. Trade Scenarios

This section illustrates the CAT reporting requirements when the execution of a customer/client order is required to be reported for public dissemination purposes, and the use a Trade event is required. Refer to Section 4.12 of the CAT Reporting Technical Specifications for Industry Members for additional information.

2.2.1. Agency Order Cross

This scenario illustrates the CAT reporting requirements when an Industry Member matches a Customer Buy order with a Sell order received from another Industry Member.
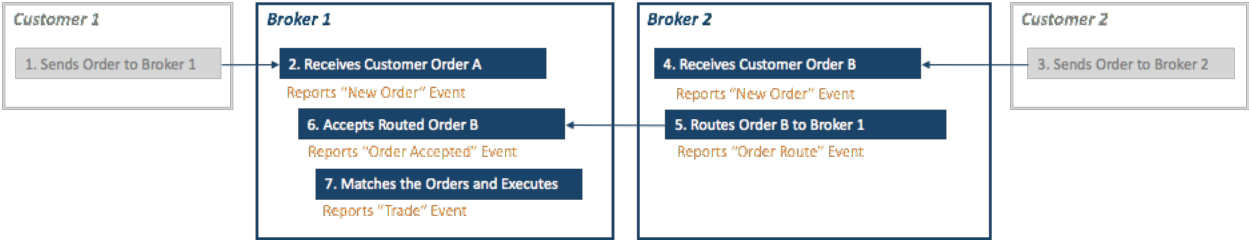
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The receipt of the order from Broker 2 (Order Accepted event)
- · The matching and execution of both orders (Trade event)

Industry Member Broker 2 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the order to Broker 1 (Order Route event)

Broker 1's customer order was fully executed, while Broker 2's customer order was partially executed.

| #	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1.	*NA*	
2	Broker 1 receives the Buy order from the customer	*Broker 1 (IMID=FRMA) reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: T side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INC123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Customer sends a Sell order to Broker 2	*NA*	
4	Broker 2 receives the Sell order from the customer	*Broker 2 (IMID=ABCD) reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O555 symbol: XYZ eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: A side: SL price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INC555 accountHolderType: A	

#	Step	Reported Event	Comments
		affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
5	Broker 2 routes the Sell order to Broker 1	*Broker 2 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O555 symbol: XYZ eventTimestamp: 20170801T143031.134456 manualFlag: false senderIMID: ABCD destination: FRMA destinationType: F routedOrderID: ABCDXYZ555 side: SL price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
6	Broker 1 receives the order from Broker 2	*Broker 1 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20170801T000000 orderID: O12347 symbol: XYZ eventTimestamp: 20170801T143031.234456 manualFlag: false receiverIMID: FRMA senderIMID: ABCD senderType: F routedOrderID: ABCDXYZ555 affiliateFlag: false deptType: A side: SL price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY=20170801	

#	Step	Reported Event	Comments
		tradingSession: REG isoInd: NA custDspIntrFlag: false	
7	Broker 1 matches and crossed the Buy and Sell orders	*Broker 1 reports a* **Trade event** type: MEOT tradeKeyDate: 20170801T000000 tradeID: TXYZ124 symbol: XYZ eventTimestamp: 20170801T143031.253456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 300 price: 10.01 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B sellDetails: orderKeyDate: 20170801T000000 orderID: O12347 side: SL	

2.2.2. Internalized Trade against Proprietary Account

This scenario illustrates the CAT reporting requirements when an Industry Member executes a customer order against its own proprietary account, and does not generate a new order to facilitate the execution of the customer order.

Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The execution of the customer order against its proprietary account (Trade event)

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180416T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180416T153035.234456 manualFlag: false deptType: T side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 executes the order against its own proprietary account	*Broker 1 reports a* **Trade event** type: MEOT tradeKeyDate: 20180416T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180416T153035.253456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 500 price: 10.00 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate:	The *buyDetails* reflect the details of customer order O12345. The *sellDetails* capture the FDID of the firm proprietary account from which the customer order was filled.

#	Step	Reported Event	Comments
		20180416T000000 orderID: O12345 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	

2.2.3. Order is Routed to and Executed by a Non-FINRA Member Firm, but the Routing FINRA Member Firm Must Report the Trade to the TRF

This scenario illustrates the CAT reporting requirements when a FINRA member firm receives an order and routes the order to a non-FINRA member firm, who executes the order. In this scenario, both parties will be required to report the order to CAT. Although the non-FINRA member firm executed the trade, the FINRA member has an obligation to report the trade to the TRF. In the TRF report, the FINRA member firm will be identified as the executing firm on the trade report with a blank contra, and the non-FINRA member will be unable to link to the trade report.
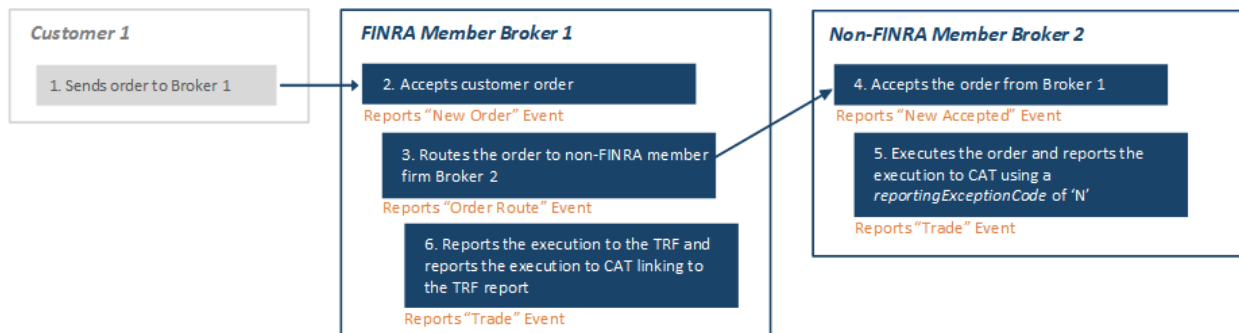
FINRA Member Broker 1 is required to report:

- · The receipt of the order (New Order event)
- · The route of the order to non-FINRA Member Broker 2 (Order Route event)
- · The execution of the order (one-sided Trade event linking to the TRF report with a *sideDetailsInd* of 'BUY')

Non-FINRA Member Broker 2 is required to report:

- · The receipt of the order from Broker 1 (Order Accepted event)
- · The execution of the order (one-sided Trade event with a *reportingExceptionCode* of 'N' and an *sideDetailsInd* of 'SELL')

FINRA member Broker 1 is required to report the execution to CAT using a Trade event with linkage to the TRF report. Broker 1 is only required to report its own side of the execution in the Trade event side details. The *sideDetailsInd* field must be populated with a value of 'BUY', indicating that the Trade event is one sided, and that only the *bBuy Details* will be populated.

Non-FINRA member Broker 2 is required to report the execution to CAT using a Trade event with a *reportingExceptionCode* of 'N' indicating that linkage to the related trade report is not available, as the Trade was executed by a non-FINRA member and reported to the TRF by the FINRA member counterparty. Broker 2 is only required to report its own side of the execution in the Trade event side details. The *sideDetailsInd* field must be populated with a value of SELL, indicating that the Trade event is one sided, and that only the *Ssell Details* will be populated.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to FINRA Member Broker 1.	*NA*	
2	Broker 1 receives the Buy order from the customer	*Broker 1 (IMID=FRMA) reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: A side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INC123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the Buy order to non-FINRA Member affiliate Broker 2	*Broker 1 reports an* **Order Route event** type: MEOR orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ	

| #	Step	Reported Event	Comments
		eventTimestamp: 20170801T143031.134456 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: ABCDXYZ555 side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
4	Broker 2 receives the order from Broker 1	*Broker 2 (IMID=FRMB) reports an* ***Order Accepted event*** type: MEOA orderKeyDate: 20170801T000000 orderID: O12347 symbol: XYZ eventTimestamp: 20170801T143031.234456 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: ABCDXYZ555 affiliateFlag: false deptType: A side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Broker 2 executes the order and reports a one-sided Trade event	*Broker 2 reports a* ***Trade event*** type: MEOT tradeKeyDate: 20170801T000000 tradeID: TXYZ124 symbol: XYZ	Since Broker 2 is not a FINRA member, Broker 1 has an obligation to report the trade to the TRF. Therefore, Broker 2 is unable to link its Trade event to the related TRF report.

#	Step	Reported Event	Comments
		eventTimestamp: 20170801T143031.253456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 300 price: 10.01 capacity: P tapeTradeID: marketCenterID: sideDetailsInd: SELL sellDetails: orderKeyDate: 20170801T000000 orderID: O12347 side: SL reportingExceptionCode: N	The *tapeTradeID* and *marketCenterID* fields must be blank, and the *reportingExceptionCode* field must be populated with a value of 'N'. In this scenario, Broker 2 is only required to report its own side in the Trade event side details. The *sideDetailsInd* field must be populated with a value of 'SELL' indicating that only the *sell Details* are populated.
6	Broker 1 reports the trade to the TRF and reports a one-sided Trade event	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20170801T000000 tradeID: TXYZ125 symbol: XYZ eventTimestamp: 20170801T143031.253456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 300 price: 10.01 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: BUY buyDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B	Since Broker 1 reported the trade to the TRF, Broker 1 must populate all relevant fields required to link to the related trade report. In this scenario, Broker 1 is only required to report its own side in the Trade event side details. The *sideDetailsInd* field must be populated with a value of 'BUY' indicating that only the *buy Details* are populated.

2.2.4. Industry Member Acting in a Mixed Capacity

This scenario illustrates the CAT reporting requirements when an Industry Member receives a customer order and handles the order in a mixed capacity. In this scenario, the Industry Member receives a

customer order for 1,000 shares, routes 500 shares as agent to an exchange for execution, and executes the remainder from a proprietary account.
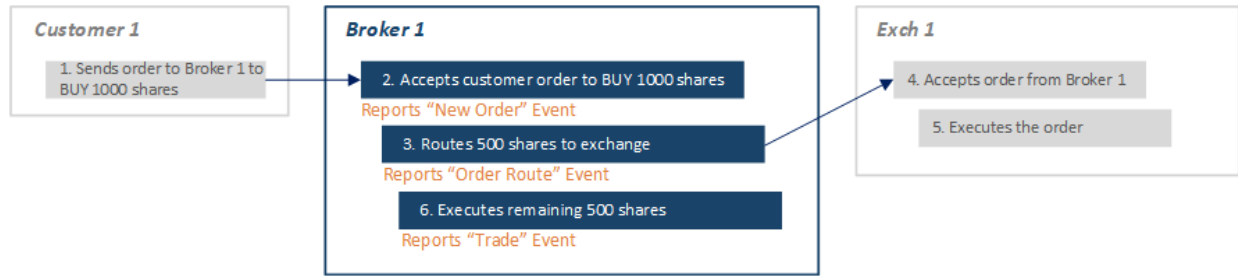
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (MENO)
- · The partial route of the customer order to an exchange (MEOR)
- · The execution of the remainder of the order from a proprietary account (MEOT)

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	NA	
2	Broker 1 accepts the customer order	Broker 1 reports a **New Order event** type: MENO orderKeyDate: 20180416T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180416T153035.234456 manualFlag: false deptType: T side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes a portion of the order to an exchange	Broker 1 reports an **Order Route event** type: MEOR	

#	Step	Reported Event	Comments
		orderKeyDate: 20180416T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180416T153037.234456 manualFlag: false senderIMID: BRK1 destination: EXCH1 destinationType: E routedOrderID: ABCDXYZ555 session: SESS1 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG affiliateFlag: false isoInd: NA	
4	The Exchange accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	
5	The Exchange executes the order	*EXCH1 reports a Participant **Trade event***	
4	Broker 1 executes the remainder of the customer order against its own proprietary account	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180416T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180416T153037.534456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 500 price: 10.00 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180416T000000 orderID: O12345 side: B sellDetails: side: SL firmDesignatedID: PROP123	The *buyDetails* reflect the details of customer order O12345. The *sellDetails* capture the FDID of the firm proprietary account from which the customer order was filled.

#	Step	Reported Event	Comments
		accountHolderType: P	

2.3.   Representative Order Scenarios

This section illustrates the CAT reporting requirements when an Industry Member generates a representative order in ~~its agency~~a firm account to facilitate a single customer order. Refer to ~~S~~sections 2.5 and 2.8.4 ~~2.10~~ for additional representative order scenarios. Refer to Appendix C of the CAT Reporting Technical Specifications for Industry Members and Section F of the CAT FAQs regarding Representative Orders for additional information.

2.3.1.   Fill of a Single Customer Order on a Riskless Principal Basis

This scenario illustrates the CAT reporting requirements when an Industry Member fills a customer order on a Riskless Principal basis. In this example, Industry Member Broker 1 generates a representative order to facilitate the execution of a customer order, and routes the order to an exchange for execution.

Industry Member Broker 1 is required to report:

· The receipt of the customer order (New Order event)

· The generation of a representative order (New Order event)

· The route of the representative order to the exchange (Order Route event)

· The fill of the customer order on a Riskless Principal basis (Order Fulfillment Event)

In phase 2a, explicit linkage between the customer order and the representative order is required, since the representative order was originated specifically to represent a single customer order and there is: 1) an existing direct electronic link in the firm's system between the order being represented and the representative order, and 2) any resulting executions are immediately and automatically applied to the represented order in the firm's system.

#	Step	Reported Event	Comments
1	The customer sends an order to Broker 1	N/A	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: T side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C12345 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 generates a representative order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12350 symbol: XYZ eventTimestamp: 20170801T143030.623456 manualFlag: false deptType: T side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C0005 accountHolderType: P affiliateFlag: false	The *representativeInd* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage is required in Phase 2a. The *aggregatedOrders* field must be populated.

#	Step	Reported Event	Comments
		aggregatedOrders: O12345@20170801T000000@@ negotiatedTradeFlag: false representativeInd: Y	
4	Broker 1 routes the representative order to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O12350 symbol: XYZ eventTimestamp: 20170801T143031.123456 manualFlag: false senderIMID: BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12350 session: 1109 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
5	Exchange 1 accepts the order	*Exchange 1 reports a Participant **Order Accepted event***	
6	Exchange 1 matches and crosses the order	*Exchange 1 reports a Participant **Trade event***	
7	Broker 1 fills the customer order on a Riskless Principal basis	*Broker 1 reports an **Order Fulfillment event*** Type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20170801T143036.123456 manualFlag: false fulfillmentLinkType: Y quantity: 500 price: 10.00 capacity: R clientDetails:	The *fulfillmentLinkType* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage is required in Phase 2a. *firmDetails* are required. Although the firm's representative order was a buy order, the *side* field in the *firmDetails* must be populated with a value of 'SL' to indicate that the firm sold shares to the customer.

#	Step	Reported Event	Comments
		orderKeyDate: 20170801T000000 orderID: O12345 side: B firmDetails: orderKeyDate: 20170801T000000 orderID: O12350 side: SL	

2.3.2. Fill of Multiple Customer Orders on a Riskless Principal Basis

This scenario illustrates the CAT reporting requirements when an Industry Member generates a proprietary order to facilitate the execution of more than one customer order on a Riskless Principal basis.

In this scenario, Industry Member Broker A receives two customer orders to buy XYZ at 10.01, and generates a single representative order that will be used to facilitate the execution of these two customer orders. The representative order is routed to an exchange where it is executed. Upon execution of the representative order, the Industry Member fills each of the customer orders on a Riskless Principal basis.
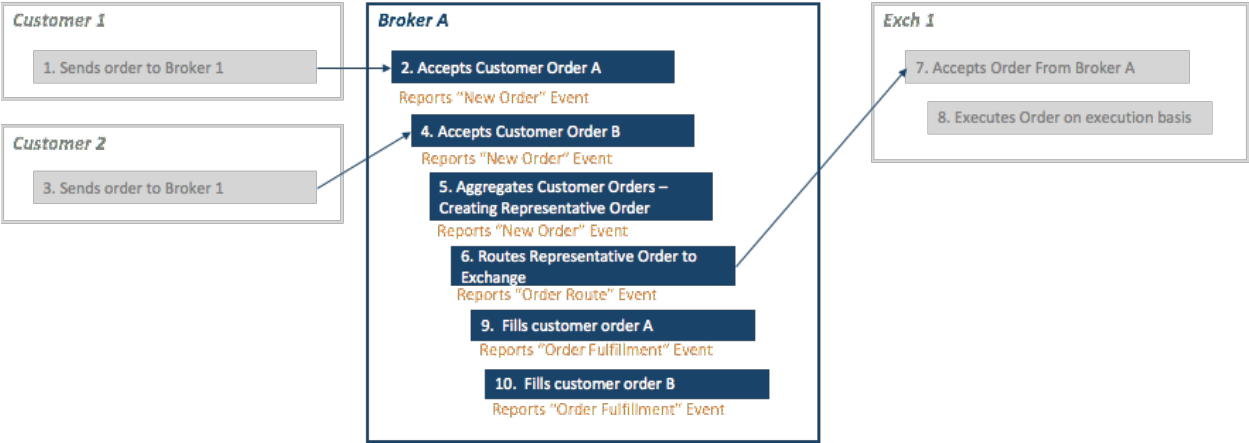
Industry Member Broker A is required to report:

- The receipt of each customer order (New Order events)
- The generation of a representative order (New Order event)
- The route of the representative order to the exchange (Order Route event)
- The fill of each customer order on a Riskless Principal basis (Order Fulfillment events)

The execution of the representative order is reported by the exchange.

Since the representative order was generated to represent more than one customer order, explicit linkage between the representative order and the customer orders is not required until Phase 2c.

#	Step	Reported Event	Comments
1	Customers 1 sends a Buy order to Broker A	*NA*	
2	Broker A receives the Buy order from Customer 1	*Broker A reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: A side: B price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Customer 2 sends a Buy order to Broker A	*NA*	
4	Broker A receives the Buy order from Customer 2	*Broker A reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12350 symbol: XYZ eventTimestamp: 20170801T143030.723456 manualFlag: false deptType: A side: B price: 10.01 quantity: 700 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C456 accountHolderType: A	

#	Step	Reported Event	Comments
		affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
5	Broker A generates a representative order	*Broker A reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: RPO555 symbol: XYZ eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: A side: B price: 10.01 quantity: 1200 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP123 accountHolderType: P affiliateFlag: false aggregatedOrders: negotiatedTradeFlag: false representativeInd: YF	The *representativeInd* field must be populated with a value of 'YF' to indicate that the order is a representative order, and that explicit linkage is not required until Phase 2c. The *aggregatedOrders* field is not required to be populated until Phase 2c.
6	Broker A routes the representative order to an exchange for execution	*Broker A reports an **Order Route event*** type: MEOR orderKeyDate: orderID: RPO555 symbol: XYZ eventTimestamp: 20170801T143031.623456 manualFlag: false senderIMID: BRKA destination: EXCH1 destinationType: E routedOrderID: S12O555 session: 1112 side: B price: 10.01 quantity: 1200	

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
7	The exchange receives the order from Broker A	*Exchange 1 reports a **Participant Order Accepted event***	
8	Execution of the order occurs on the exchange	*Exchange 1 reports a **Participant Trade event***	
9, 10	Broker A fills each individual customer order on a Riskless Principal basis	*Broker A reports an **Order Fulfillment event (1 of 2)*** type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO55501 symbol: XYZ eventTimestamp: 20170801T143040.123456 manualFlag: false quantity: 500 price: 10.01 capacity: R fulfillmentLinkType: YF clientDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B *Broker A reports an **Order Fulfillment event (2 of 2)*** type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO55502 symbol: XYZ eventTimestamp: 20170801T143040.323456 manualFlag: false quantity: 700 price: 10.01 capacity: R fulfillmentLinkType: YF clientDetails: orderKeyDate: 20170801T000000	The *fulfillmentLinkType* field must be populated with a value of 'YF' to indicate that the order is a representative order, and that explicit linkage is not required until Phase 2c. *firmDetails* are not required until Phase 2c.

#	Step	Reported Event	Comments
		orderID: O12350 side: B	

2.3.3. Single Customer Order Handled on a Riskless Principal Basis Where No Execution Occurs

This scenario illustrates the CAT reporting requirements when an Industry Member handles a customer order on a Riskless Principal basis, but the order is ultimately not filled. In this example, Industry Member Broker 1 generates a representative order to facilitate the execution of a customer order, but no further action occurs on the order due to market conditions.
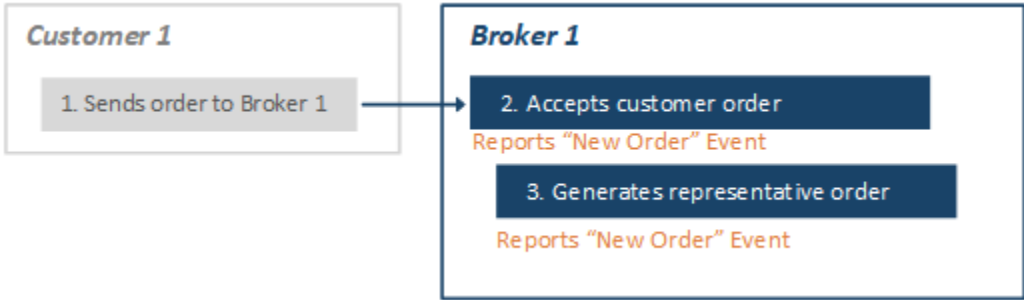
Industry Member Broker 1 is required to report:

·   The receipt of the customer order (New Order event)
·   The generation of a representative order (New Order event)

In phase 2a, explicit linkage between the customer order and the representative order is required, since the representative order was originated specifically to represent a single customer order and there is an existing direct electronic link in the firm's system between the order being represented and the representative order. While there are no executions on this order in this scenario, any potential executions would have been immediately and automatically applied.

#	Step	Reported Event	Comments
1	The customer sends an order to Broker 1	N/A	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ	

| #	Step	Reported Event	Comments
		eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: T side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C12345 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 generates a representative order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12350 symbol: XYZ eventTimestamp: 20170801T143030.623456 manualFlag: false deptType: T side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C0005 accountHolderType: P affiliateFlag: false aggregatedOrders: O12345@20170801T000000@@ negotiatedTradeFlag: false representativeInd: Y	The *representativeInd* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage is required in Phase 2a. The *aggregatedOrders* field must be populated.

2.3.4. Fill of a Single Customer Order on an Average Price Basis

This scenario illustrates the CAT reporting requirements when an Industry Member works a customer order through an average price account and generates one or more representative orders that are routed to an exchange. The Industry Member then fills the customer order on an average price basis.
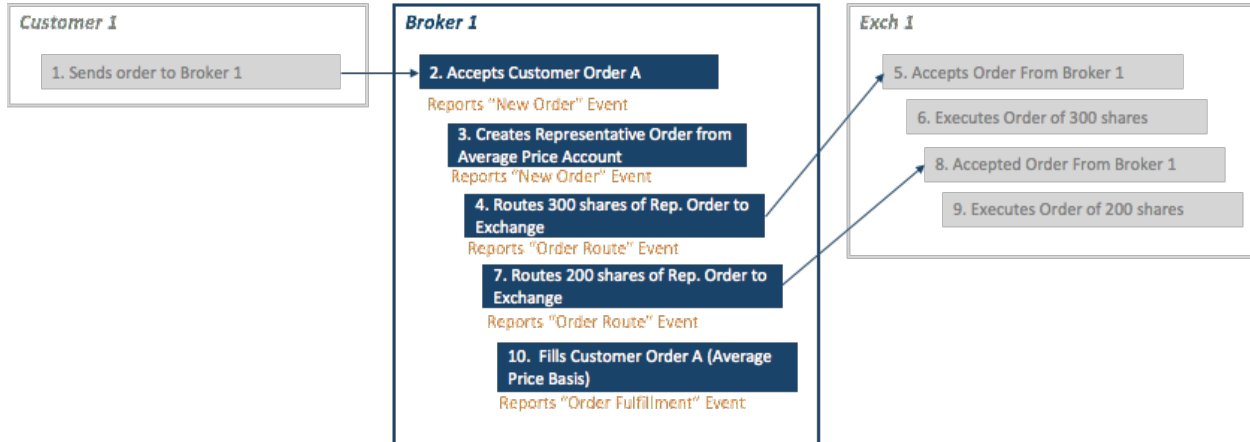
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The generation of a representative order in an average price account (New Order event)
- · Each route of the representative order (Order Route events)
- · The fill of the customer order at an average price (Order Fulfillment event)

Since the customer order was filled at an average price, explicit linkage between the representative order and the customer order is not required until Phase 2c.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 500 orderType: LMT	

#	Step	Reported Event	Comments
		timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 generates a representative order from its average price account	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: R04826 symbol: XYZ eventTimestamp: 20180417T153035.534456 manualFlag: false deptType: T side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: AVG0123 accountHolderType: V affiliateFlag: false aggregatedOrders: negotiatedTradeFlag: false representativeInd: YF	The *representativeInd* field must be populated with a value of 'YF' to indicate that the order is a representative order, and that explicit linkage is not required until Phase 2c. The *aggregatedOrders* field is not required to be populated until Phase 2c.
4	Broker 1 routes 300 shares of the representative order to exchange EXCH1	*Broker 1 reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: R04826 symbol: XYZ eventTimestamp: 20180417T153036.234556 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: s5	

#	Step	Reported Event	Comments
		side: B price: 10.00 quantity: 300 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
5	The Exchange accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted** event*	
6	The Exchange executes the order	*EXCH1 reports a Participant **Trade** event*	
7	Broker 1 routes 200 shares of the representative order to exchange EXCH1	*Broker 1 reports an **Order Route** event* type: MEOR orderKeyDate: 20180417T000000 orderID: R04826 symbol: XYZ eventTimestamp: 20180417T153036.234566 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: XYZ0888 session: s5 side: B price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
8	The Exchange accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted** event*	
9	The Exchange executes a partial quantity (200) of the order	*EXCH1 reports a Participant **Trade** event*	
10	Broker 1 fills the customer order from its average price account	Broker 1 reports an **Order Fulfillment** event type: MEOF fillKeyDate: 20180417T000000	The *fulfillmentLinkType* field must be populated with a value of 'YF' to indicate that the order is a representative order, and that explicit linkage is not required until Phase 2c.

#	Step	Reported Event	Comments
		fulfillmentID: AABB1231 symbol: XYZ eventTimestamp: 20180417T153037.326456 manualFlag: false fulfillmentLinkType: YF quantity: 500 price: 10.00 capacity: A clientDetails: orderKeyDate: 20180417T000000 orderID: O12345 side: B	*firmDetails* are not required until Phase 2c.

2.3.5. Fill of a Single Customer Order from a Pre-Existing Principal Order

This scenario illustrates the CAT reporting requirements when an Iindustry Mmember fills a single customer order from a pre-existing principal order as a result of a Manning Obligation. In this scenario, the Industry Member originates a new principal order and routes it to an exchange. Before the principal order is executed, the Industry Member receives a customer order. Upon execution of the principal order, the Industry Member fills the customer order on a Riskless Principal basis.
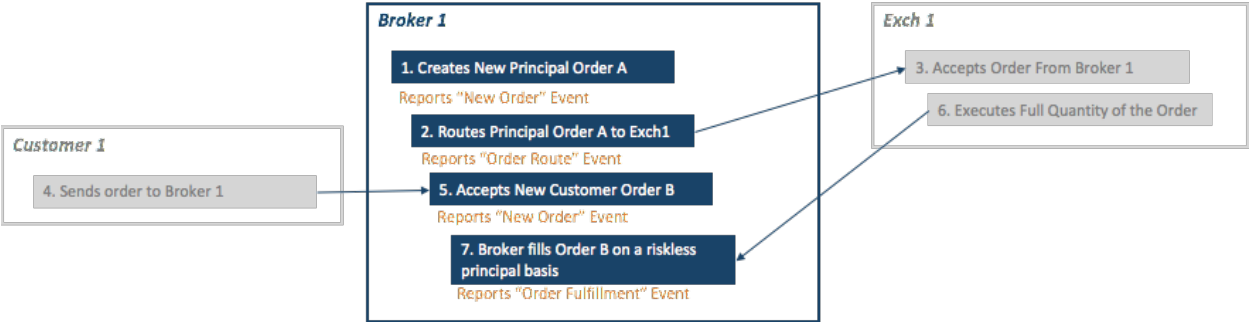
Industry Member Broker 1 is required to report:

- · The origination of the principal order (New Order event)
- · The route of the principal order to an exchange (Order Route event)
- · The receipt of the customer order (New Order event)
- · The fill of the customer order on a Riskless Principal basis (Order Fulfillment event)

In phase 2a, explicit linkage between the customer order and the principal order is required when the customer order is filled from a pre-existing principal order.

#	Step	Reported Event	Comments
1	Broker 1 originates a new principal order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 manualFlag: false deptType: T side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PRO001 accountHolderType: P aggregatedOrders: affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	The *representativeInd* field must be populated with a value of 'N' to indicate that this was not a representative order, as the principal order was not generated to facilitate the execution of a customer order. The *aggregatedOrders* field must not be populated. If the order generated by Broker 1 had been generated in a proprietary account where it was eligible to receive customer fills, the Industry Member would be able to populate a *representativeInd* value of "YE" in this step without receiving a rejection in CAT.
2	Broker 1 routes the principal order to Exch 1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234556 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA	

#	Step	Reported Event	Comments
3	Exch 1 accepts the principal order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
4	Customer sends an order to Broker 1	*NA*	
5	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180501T153035.634456 manualFlag: false deptType: T side: B price: 10.00 quantity: 800 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
6	Exch 1 executes the full quantity of the principal order	*Exch 1 reports a Participant **Trade event***	
7	Broker 1 executes the customer order on a Riskless Principal basis with the shares acquired from the pre-existing principal order	*Broker 1 reports an **Order Fulfillment event*** type: MEOF fillKeyDate: 20180501T000000 fulfillmentID: FXYZ111 symbol: XYZ eventTimestamp: 20180501T153035.653456 manualFlag: false fulfillmentLinkType: YP quantity: 800 price: 10.00 capacity: R clientDetails: orderKeyDate: 20180501T000000	The *fulfillmentLinkType* field must be populated with a value of 'YP' to indicate that the customer order is being filled from a pre-existing principal order, and that explicit linkage is required in Phase 2a. *firmDetails* are required.

#	Step	Reported Event	Comments
		orderID: O34567 side: B firmDetails: orderKeyDate: 20180501T000000 orderID: O12345 side: SL	

2.3.6. Customer Order is Received and Filled on a Net Basis

This scenario illustrates the CAT reporting requirements when an Industry Member receives a customer order and generates a representative order to facilitate the execution of the customer order. The Industry Member routes the representative order to an exchange for execution, then sells the shares to the customer at a different price than it purchased the shares on the exchange. This scenario is commonly referred to as 'net trading'.

Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The generation of the representative order (New Order event)
- · The route of the representative order to an exchange (Order Route event)
- · The execution of the customer order at a net price (Order Trade event)

In this scenario, since the customer order is executed at a price different than what Broker 1 received on the exchange, Broker 1 has an obligation to submit a media trade report for public dissemination purposes. Therefore, Broker 1 would be required to report an Order Trade event representing the outcome of the customer order as opposed to an Order Fulfillment event.

Since resulting executions are not immediately and automatically applied to the represented order in the firm's system, explicit linkage between the representative order and the customer orders is not required until Phase 2c.

#	Step	Reported Event	Comments
1	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180501T153035.634456 manualFlag: false deptType: T side: B price: 9.99 quantity: 1,000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Broker 1 originates a proprietary order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153036.234456 manualFlag: false deptType: T side: B price: 9.97 quantity: 1,000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PRO001 accountHolderType: P aggregatedOrders: affiliateFlag: false negotiatedTradeFlag: false representativeInd: YF	The *representativeInd* field must be populated with a value of 'YF' to indicate that the order is a representative order, and that explicit linkage is not required until Phase 2c. The *aggregatedOrders* field is not required to be populated until Phase 2c.
3	Broker 1 routes the proprietary order to	*Broker 1 reports an **Order Route event***	

| #	Step	Reported Event	Comments
	Exch 1	type: MEOR orderKeyDate: 20180501T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153036.234556 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: B price: 9.97 quantity: 1,000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA	
4	Exch 1 accepts the proprietary order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
5	Exch 1 executes the order	*Exch 1 reports a Participant **Trade event***	
6	Broker 1 satisfies the original customer order at a price of 9.99	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180501T153038.234556 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1,000 price: 9.99 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180501T000000 orderID: O34567	The *buyDetails* reflect the details of customer order O34567. The *sellDetails* reflect the details of representative order O12345.

#	Step	Reported Event	Comments
		side: B sellDetails: orderKeyDate: 20180501T000000 orderID: O12345 side: SL	

2.3.7.   Fill of a Single Customer Order with Multiple Executions Print for Print

This scenario illustrates the CAT reporting requirements when an Industry Member generates a representative order in its agency account to facilitate a single customer order. The representative order is routed out to the market and receives multiple fills, which are passed back to the customer's account on a print for print basis.

Industry Member Broker 1 is required to report:

- ·   The receipt of the customer order (New Order event)
- ·   The generation of the representative order (New Order event)
- ·   The route of the representative order to the exchange (Order Route event)
- ·   Each print for print fill of the customer order (Order Fulfillment event)

In phase 2a, explicit linkage between the customer order and the representative order is required, since the representative order was originated specifically to represent a single customer order and there is: 1) an existing direct electronic link in the firm's system between the order being represented and the representative order, and 2) any resulting executions are immediately and automatically applied to the represented order in the firm's system.

#	Step	Reported Event	Comments
1	The customer sends an order to Broker 1	N/A	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: T side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C12345 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 generates a representative order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12350 symbol: XYZ eventTimestamp: 20170801T143030.623456 manualFlag: false deptType: T side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C0005 accountHolderType: V affiliateFlag: false	The *representativeInd* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage is required in Phase 2a. The *aggregatedOrders* field must be populated.

#	Step	Reported Event	Comments
		aggregatedOrders: O12345@20170801T000000@@ negotiatedTradeFlag: false representativeInd: Y	
4	Broker 1 routes the representative order to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O12350 symbol: XYZ eventTimestamp: 20170801T143031.123456 manualFlag: false senderIMID: BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12350 session: 1109 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
5	Exchange 1 accepts the order	*Exchange 1 reports a Participant **Order Accepted event***	
6	Exchange 1 partially executes the order (300 shares)	*Exchange 1 reports a Participant **Trade event***	
7	Broker 1 fills the customer order print for print	*Broker 1 reports an **Order Fulfillment event*** Type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20170801T143036.123456 manualFlag: false fulfillmentLinkType: Y quantity: 300 price: 10.00 capacity: A	The *fulfillmentLinkType* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage is required in Phase 2a. firmDetails are required.

#	Step	Reported Event	Comments
		clientDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B firmDetails: orderKeyDate: 20170801T000000 orderID: O12350 side: SL	
8	Exchange 1 executes the remainder of the order (700 shares)	*Exchange 1 reports a Participant* **Trade event**	
9	Broker 1 fills the customer order print for print	*Broker 1 reports an* **Order Fulfillment event** Type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO12360 symbol: XYZ eventTimestamp: 20170801T143036.123456 manualFlag: false fulfillmentLinkType: Y quantity: 700 price: 10.00 capacity: A clientDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B firmDetails: orderKeyDate: 20170801T000000 orderID: O12350 side: SL	The *fulfillmentLinkType* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage is required in Phase 2a. *firmDetails* are required.

2.3.8. Firm Generates a Representative Order to Facilitate the Execution of another Representative Order

This scenario illustrates the CAT reporting requirements when an Industry Member generates a representative order to facilitate the execution of another representative order. In this scenario, the Industry Member receives two customer orders, and generates a single representative order (Representative Order A) in its agency average price account that will be used to facilitate the execution

of these two customer orders. The Industry Member then generates a second representative order (Representative Order B) to facilitate the execution of the original representative order on a Riskless Principal basis.
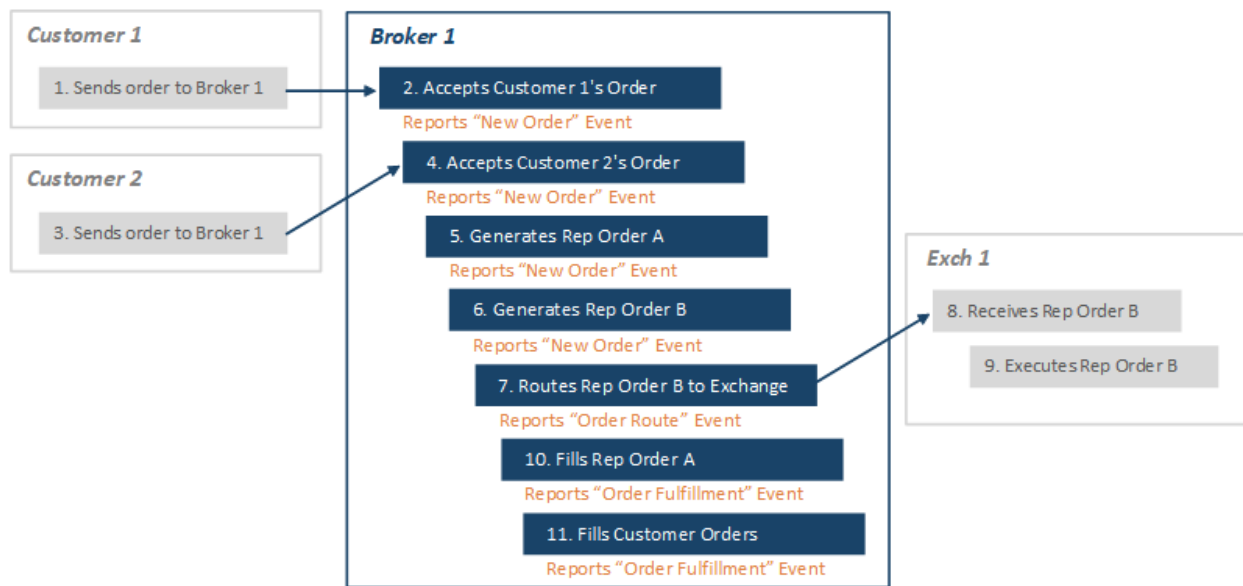
Industry Member Broker 1 is required to report:

- The receipt of each customer order (New Order events)
- The generation of Representative Orders A and B (New Order events)
- The route of Representative Order B to an exchange (Order Route event)
- The fill of Representative Order A on a Riskless Principal basis (Order Fulfillment event)
- The fill of each customer order from its agency average price account (Order Fulfillment events)

The execution of Representative Order B is reported by the exchange.

Since Representative Order A was generated to represent more than one customer order, explicit linkage between Representative Order A and the customer orders is not required until Phase 2c.
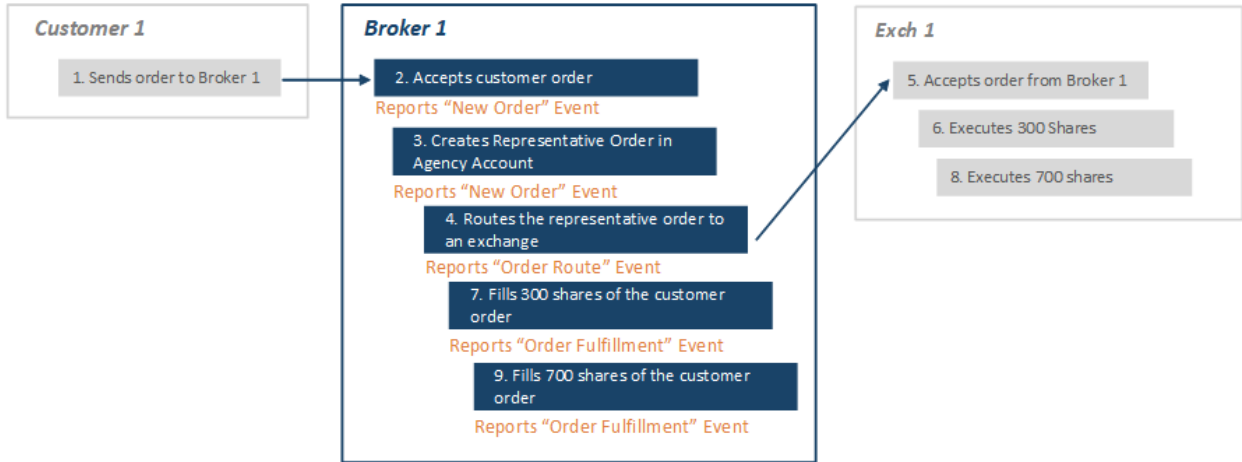
In phase 2a, explicit linkage between Representative Order A and Representative Order B is required, since Representative Order B was originated specifically to represent a single order and there is: 1) an existing direct electronic link in the firm's system between the order being represented and the representative order, and 2) any resulting executions are immediately and automatically applied to the represented order in the firm's system.

This reporting scenario is applicable when a firm's systems generates two separate and distinct representative orders. This reporting scenario is not applicable if the firm's system only generates one representative order, combining steps 5 and 6. If the two representative orders are generated by different desks or departments within the firm, an Order Internal Route Accepted event is required.

#	Step	Reported Event	Comments
1	Customers 1 sends a Buy order to Broker 1	*NA*	
2	Broker 1 receives the Buy order from Customer 1	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: A side: B price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Customer 2 sends a Buy order to Broker 1	*NA*	
4	Broker 1 receives the Buy order from Customer 2	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O12350 symbol: XYZ eventTimestamp: 20170801T143030.723456 manualFlag: false deptType: A side: B price: 10.01 quantity: 700 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C456 accountHolderType: A	

| #	Step	Reported Event	Comments
		affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
5	Broker 1 generates Representative Order A in an agency average price account	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: AVGO555 symbol: XYZ eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: A side: B price: 10.01 quantity: 1200 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: AVG123 accountHolderType: V affiliateFlag: false aggregatedOrders: negotiatedTradeFlag: false representativeInd: YF	The *representativeInd* field must be populated with a value of 'YF' to indicate that the order is a representative order, and that explicit linkage is not required until Phase 2c. The *aggregatedOrders* field is not required to be populated until Phase 2c.
6	Broker 1 generates Representative Order B	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: RPO556 symbol: XYZ eventTimestamp: 20170801T143031.723456 manualFlag: false deptType: A side: B price: 10.01 quantity: 1200 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP123	The *representativeInd* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage is required in Phase 2a. The *aggregatedOrders* field must be populated.

#	Step	Reported Event	Comments
		accountHolderType: P affiliateFlag: false aggregatedOrders: AVGO555@20170801T000000@@ negotiatedTradeFlag: false representativeInd: Y	
7	Broker 1 routes Representative Order B to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: RPO556 symbol: XYZ eventTimestamp: 20170801T143031.723456 manualFlag: false senderIMID: BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12350 session: 1109 side: B price: 10.01 quantity: 1200 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
8	Exchange 1 accepts the order	*Exchange 1 reports a Participant **Order Accepted event***	
9	Exchange 1 matches and crosses the order	*Exchange 1 reports a Participant **Trade event***	
10	Broker 1 fills Representative Order A on a Riskless Principal basis	*Broker 1 reports an **Order Fulfillment event*** Type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20170801T143036.123456 manualFlag: false fulfillmentLinkType: Y quantity: 1200	The *fulfillmentLinkType* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage is required in Phase 2a. *firmDetails* are required.

#	Step	Reported Event	Comments
		price: 10.01 capacity: R clientDetails: orderKeyDate: 20170801T000000 orderID: AVGO555 side: B firmDetails: orderKeyDate: 20170801T000000 orderID: RPO556 side: SL	
11	Broker 1 fills Customer 1's order from its average price account	*Broker 1 reports an **Order Fulfillment event*** Type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO12360 symbol: XYZ eventTimestamp: 20170801T143036.123456 manualFlag: false fulfillmentLinkType: YF quantity: 500 price: 10.01 capacity: R clientDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B	The ~~representativeInd~~ *fulfillmentLinkType* field must be populated with a value of 'YF' to indicate that the order is a representative order, and that explicit linkage is not required until Phase 2c. *firmDetails* are not required. ~~The *aggregatedOrders* field is not required to be populated until Phase 2c.~~
12	Broker 1 fills Customer 2's order from its average price account	*Broker 1 reports an **Order Fulfillment event*** Type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO12370 symbol: XYZ eventTimestamp: 20170801T143036.123456 manualFlag: false fulfillmentLinkType: YF quantity: 700 price: 10.01 capacity: R clientDetails:	The ~~representativeInd~~ *fulfillmentLinkType* field must be populated with a value of 'YF' to indicate that the order is a representative order, and that explicit linkage is not required until Phase 2c. *firmDetails* are not required. ~~The *aggregatedOrders* field is not required to be populated until Phase 2c.~~

#	Step	Reported Event	Comments
		orderKeyDate: 20170801T000000 orderID: O12350 side: B	

2.3.9. Fill of Multiple Customer Orders at an Average Price Using an Unlinked OMS/EMS

This scenario illustrates the CAT reporting requirements when an Industry Member fills customer orders at an average price, but a direct electronic link does not exist between its OMS and EMS. In this example, Industry Member Broker 1 receives three customer orders in its OMS, and generates a representative order to facilitate the execution of the customer orders in its EMS. The representative order is further routed to an exchange for execution, where it receives multiple fills. The Industry Member manually assigns fills to the customer orders in its OMS at an average price of the fills received on the exchange.

In this scenario, direct electronic linkage does not exist between the customer orders and the representative order because direct electronic linkage does not exist between the firm's OMS and EMS.
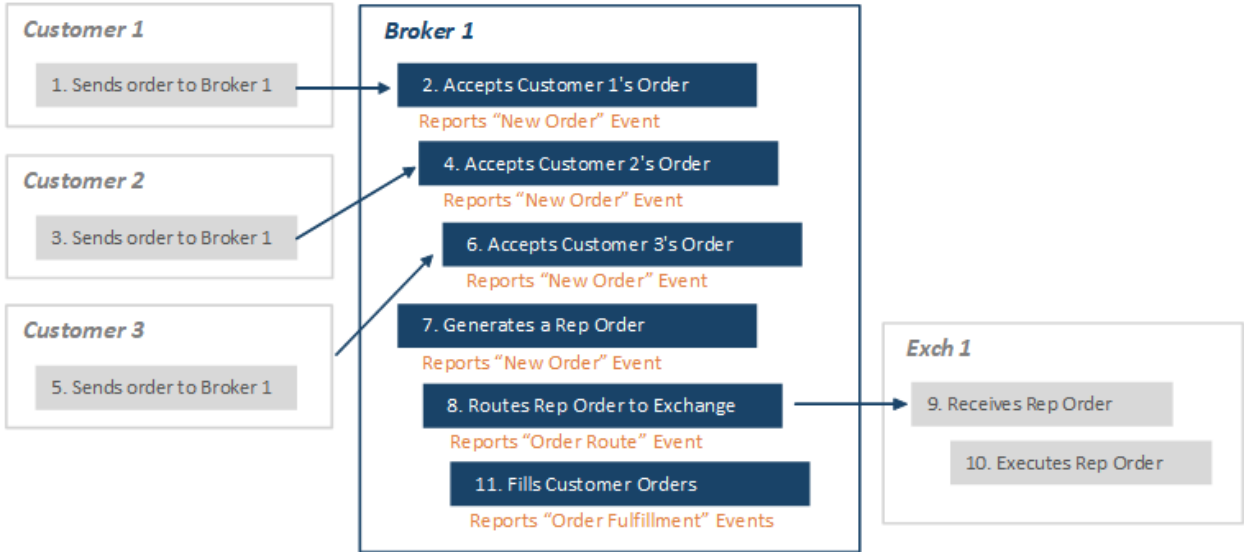
Industry Member Broker 1 is required to report:

- · The receipt of each customer order (New Order events)
- · The generation of a representative order (New Order event)
- · The route of the representative order to the exchange (Order Route event)
- · The fill of each customer at an average price (Order Fulfillment event)

In this scenario, explicit linkage between the customer orders and the representative order is not required, since there is no direct electronic link in the firm's system between the orders being represented and the

representative order. However, CAT requires that the orders be marked with the relevant *representativeInd* or *fulfillmentLinkType* value of "YE" to indicate that each order was eligible for customer fills via an unlinked system.

The Industry Member must populate a *representativeInd* value of "YE" on its New Order event reflecting the origination of the representative order. When a *representativeInd* value of "YE" is populated, the *aggregatedOrders* field must be blank.

The Industry Member must populate a *fulfillmentLinkType* value of "YE" on its Order Fulfillment events reflecting the fill of each customer order. In Phase 2a, when a *fulfillmentLinkType* value of "YE" is populated, *fFirm Details* are not required. In Phase 2c, when a *fulfillmentLinkType* value of "YE" is populated, the *fFirm Details* must be populated with the *accountHolderType* and the FDID of the firm account from which the order was filled, and the *orderID* and *orderKeyDate* fields in the *Ffirm Details* must be blank.

Refer to Appendix C of the CAT Reporting Technical Specifications for Industry Members for additional information on use of the value "YE".

#	Step	Reported Event	Comments
1	Customer 1 sends a Buy order to Broker 1	*NA*	
2	Broker 1 receives the Buy order from Customer 1	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: A side: B price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Customer 2 sends a	*NA*	

#	Step	Reported Event	Comments
	Buy order to Broker 1		
4	Broker 1 receives the Buy order from Customer 2	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12350 symbol: XYZ eventTimestamp: 20170801T143030.723456 manualFlag: false deptType: A side: B price: 10.01 quantity: 700 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C456 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
5	Customer 3 sends a Buy order to Broker 1	*NA*	
6	Broker 1 receives the Buy order from Customer 3	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12355 symbol: XYZ eventTimestamp: 20170801T143030.923456 manualFlag: false deptType: A side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C789 accountHolderType: A affiliateFlag: false	

#	Step	Reported Event	Comments
		negotiatedTradeFlag: false representativeInd: N	
7	Broker 1 generates a representative order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: RPO555 symbol: XYZ eventTimestamp: 20170801T143031.323456 manualFlag: false electronicTimestamp: deptType: A side: B price: 10.01 quantity: 1500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP123 accountHolderType: V affiliateFlag: false aggregatedOrders: negotiatedTradeFlag: false representativeInd: YE	Although Broker 1 is manually entering the order into its EMS, the origination of a proprietary order in a firm system is always considered electronic regardless if it is entered by a trader or computer generated. The *representativeInd* field must be populated with a value of 'YE' to indicate that the order is a representative order, and that explicit linkage between the customer orders and the representative order does not exist. The *aggregatedOrders* field must be blank.
8	Broker 1 routes the representative order to an exchange for execution	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: RPO555 symbol: XYZ eventTimestamp: 20170801T143031.623456 manualFlag: false senderIMID: BRKA destination: EXCH1 destinationType: E routedOrderID: S12O555 session: 1112 side: B price: 10.01 quantity: 1500	

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA	
9	The exchange receives the order from Broker 1	*Exchange 1 reports a **Participant Order Accepted event***	
10	Executions of the order occur on the exchange	*Exchange 1 reports **Participant Trade events***	
11	Broker 1 fills each individual customer order at an average price	*Broker 1 reports an **Order Fulfillment event (1 of 3)*** type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO55501 symbol: XYZ eventTimestamp: 20170801T143040.123456 manualFlag: true electronicTimestamp: 20170801T143040.123456 quantity: 500 price: 10.01 capacity: A fulfillmentLinkType: YE clientDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B firmDetails: side: firmDesignatedID: accountHolderType: *Broker 1 reports an **Order Fulfillment event (2 of 3)*** type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO55502 symbol: XYZ eventTimestamp: 20170801T143040.323456 manualFlag: true electronicTimestamp: 20170801T143040.323456	Since Broker 1 is manually filling the customer orders in its OMS, the order could be considered either manual or electronic. If the fulfillment is reported as a manual event, the *eventTimestamp* and the *electronicTimestamp* fields must be populated with the same timestamp. The *fulfillmentLinkType* field must be populated with a value of 'YE' to indicate that the order is a representative order, and that explicit linkage between the customer orders and the representative order does not exist. *fFirm Details* are not required until Phase 2c. In Phase 2c, Broker 1 must populate the *fFirm Details* with the *accountHolderType* and the FDID of the account from which the order was filled.

#	Step	Reported Event	Comments
		quantity: 700	
		price: 10.01	
		capacity: A	
		fulfillmentLinkType: YE	
		clientDetails:	
		orderKeyDate:	
		20170801T000000	
		orderID: O12350	
		side: B	
		firmDetails:	
		side:	
		firmDesignatedID:	
		accountHolderType:	
		*Broker 1 reports an **Order Fulfillment event (3 of 3)***	
		type: MEOF	
		fillKeyDate: 20170801T000000	
		fulfillmentID: FO55502	
		symbol: XYZ	
		eventTimestamp:	
		20170801T143040.523456	
		manualFlag: true	
		electronicTimestamp:	
		20170801T143040.523456	
		quantity: 300	
		price: 10.01	
		capacity: A	
		fulfillmentLinkType: YE	
		clientDetails:	
		orderKeyDate:	
		20170801T000000	
		orderID: O12355	
		side: B	
		firmDetails:	
		side:	
		firmDesignatedID:	
		accountHolderType:	

2.3.10. Fill of Multiple Customer Orders at an Average Price from an Existing Position

This scenario illustrates the CAT reporting requirements when an Industry Member fills customer orders at an average price via a work flow whereby individual orders are filled after a position has been established and no direct link exists in the firm's system between any single customer order and any

single representative order. In this example, Industry Member Broker 1 receives three customer orders. The Industry Member generates two independent orders, from which part or all of the position at the weighted average cost may be given to the customer. The firm orders are further routed to an exchange for execution, and as the firm orders are filled, a position is established in a firm owned or controlled account. The customer orders are ultimately filled from the firm's resulting position at the weighted average cost.
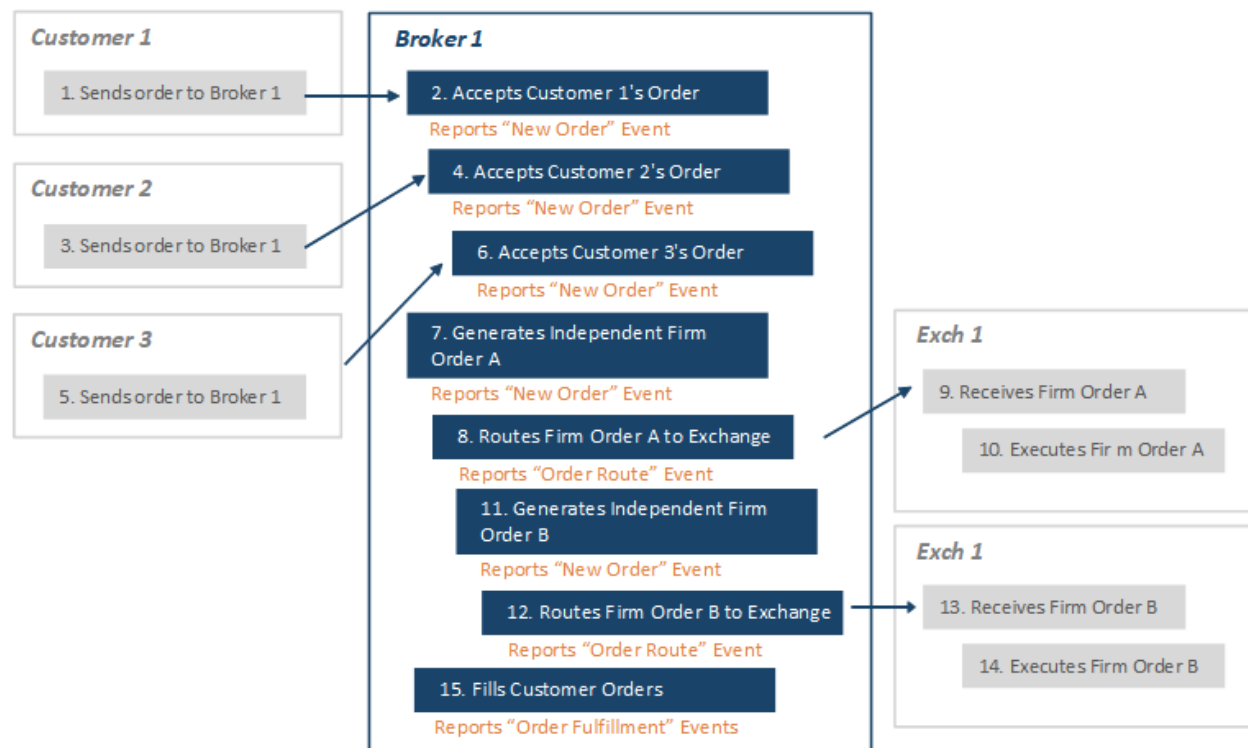
Industry Member Broker 1 is required to report:

- The receipt of each customer order (New Order events)
- The generation of each firm order (New Order event)
- The route of each firm order to the exchange (Order Route event)
- The fill of each customer order at an average price (Order Fulfillment event)

In this scenario, explicit linkage between the customer orders and the firm order is not required, since there is no direct electronic link in the firm's system, as the customer orders were filled from an existing position. However, CAT requires that the orders be marked with the relevant *representativeInd* or *fulfillmentLinkType* value of "YE" to indicate that each order was eligible for customer fills.

The Industry Member must populate a *representativeInd* value of "YE" on its New Order event reflecting the origination of the firm order, since part or all of the order may be used to fill customer orders. When a *representativeInd* value of "YE" is populated, the *aggregatedOrders* field must be blank.

The Industry Member must populate a *fulfillmentLinkType* value of "YE" on its Order Fulfillment events reflecting the fill of each customer order. In Phase 2a, when a *fulfillmentLinkType* value of "YE" is populated, ~~f~~*Firm* ~~Details~~ are not required. In Phase 2c, when a *fulfillmentLinkType* value of "YE" is populated, the ~~f~~*Firm* ~~Details~~ must be populated with the *accountHolderType* and the FDID of the firm account from which the order was filled, and the *orderID* and *orderKeyDate* fields in the ~~f~~*Firm* ~~Details~~ must be blank.

Refer to Appendix C of the CAT Reporting Technical Specifications for Industry Members for additional information on use of the value "YE".

#	Step	Reported Event	Comments
1	Customer 1 sends a Buy order to Broker 1	*NA*	
2	Broker 1 receives the Buy order from Customer 1	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: A side: B price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Customer 2 sends a Buy order to Broker 1	*NA*	
4	Broker 1 receives the Buy order from Customer 2	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O12350 symbol: XYZ	

#	Step	Reported Event	Comments
		eventTimestamp: 20170801T143030.723456 manualFlag: false deptType: A side: B price: 10.01 quantity: 700 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C456 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
5	Customer 3 sends a Buy order to Broker 1	*NA*	
6	Broker 1 receives the Buy order from Customer 3	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12355 symbol: XYZ eventTimestamp: 20170801T143030.923456 manualFlag: false deptType: A side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C789 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
7	Broker 1 generates an independent firm order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000	Although Broker 1 is manually entering the order into its EMS, the origination of a proprietary order in a firm system is always considered electronic regardless if it is entered by

#	Step	Reported Event	Comments
		orderID: RPO555 symbol: XYZ eventTimestamp: 20170801T143031.123456 manualFlag: false electronicTimestamp: deptType: A side: B price: 10.01 quantity: 600 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP123 accountHolderType: V affiliateFlag: false aggregatedOrders: negotiatedTradeFlag: false representativeInd: YE	a trader or computer generated. The *representativeInd* field must be populated with a value of 'YE' to indicate that the order is a representative order, and that explicit linkage between the customer orders and the representative order does not exist. The *aggregatedOrders* field must be blank. If the firm's systems allow for direct linkage between the customer orders and the firm's proprietary order, the Industry Member would be able to populate a *representativeInd* value of "Y" in this step without receiving a rejection in CAT.
8	Broker 1 routes the firm order to an exchange for execution	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: RPO555 symbol: XYZ eventTimestamp: 20170801T143031.623456 manualFlag: false senderIMID: BRKA destination: EXCH1 destinationType: E routedOrderID: S12O555 session: 1112 side: B price: 10.01 quantity: 600 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA	
9	The exchange receives the order from Broker 1	*Exchange 1 reports a **Participant Order Accepted event***	

#	Step	Reported Event	Comments
10	Execution of the order occurs on the exchange	*Exchange 1 reports a **Participant Trade event***	
11	Broker 1 generates an independent firm order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: RPO555 symbol: XYZ eventTimestamp: 20170801T143032.123456 manualFlag: false electronicTimestamp: deptType: A side: B price: 10.01 quantity: 900 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP123 accountHolderType: V affiliateFlag: false aggregatedOrders: negotiatedTradeFlag: false representativeInd: YE	Although Broker 1 is manually entering the order into its EMS, the origination of a proprietary order in a firm system is always considered electronic regardless if it is entered by a trader or computer generated. The *representativeInd* field must be populated with a value of 'YE' to indicate that the order is a representative order, and that explicit linkage between the customer orders and the representative order does not exist. The *aggregatedOrders* field must be blank. If the firm's systems allow for direct linkage between the customer orders and the firm's proprietary order, the Industry Member would be able to populate a *representativeInd* value of "Y" in this step without receiving a rejection in CAT.
12	Broker 1 routes the firm order to an exchange for execution	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: orderID: RPO555 symbol: XYZ eventTimestamp: 20170801T143035.623456 manualFlag: false senderIMID: BRKA destination: EXCH1 destinationType: E routedOrderID: S12O560 session: 1112 side: B price: 10.01 quantity: 900 orderType: LMT	

#	Step	Reported Event	Comments
		timeInForce: DAY=20170801 tradingSession: REG isoInd: NA	
13	The exchange receives the order from Broker 1	*Exchange 1 reports a **Participant Order Accepted event***	
14	Execution of the order occurs on the exchange	*Exchange 1 reports a **Participant Trade event***	

15	Broker 1 fills each individual customer order at the weighted average cost in a Riskless Principal capacity	*Broker 1 reports an **Order Fulfillment event (1 of 3)***
		
		type: MEOF
		fillKeyDate: 20170801T000000
		fulfillmentID: FO55501
		symbol: XYZ
		eventTimestamp:
		20170801T143040.123456
		manualFlag: true
		electronicTimestamp:
		20170801T143040.123456
		quantity: 500
		price: 10.01
		capacity: RA
		fulfillmentLinkType: YE
		clientDetails:
		    orderKeyDate:
		    20170801T000000
		    orderID: O12345
		    side: B
		firmDetails:
		    side:
		    firmDesignatedID:
		    accountHolderType:
		
		*Broker 1 reports an **Order Fulfillment event (2 of 3)***
		
		type: MEOF
		fillKeyDate: 20170801T000000
		fulfillmentID: FO55502
		symbol: XYZ
		eventTimestamp:
		20170801T143040.323456
		manualFlag: true
		electronicTimestamp:
		20170801T143040.323456
		quantity: 700
			Since Broker 1 is manually filling the customer orders in its OMS, the order could be considered either manual or electronic. If the fulfillment is reported as a manual event, the *eventTimestamp* and the *electronicTimestamp* fields must be populated with the same timestamp.
			
			The *fulfillmentLinkType* field must be populated with a value of 'YE' to indicate that the order is a representative order, and that explicit linkage between the customer orders and the representative order does not exist.
			
			~~F~~firm ~~Details~~ are not required until Phase 2c. In Phase 2c, Broker 1 must populate the ~~f~~Firm ~~Details~~ with the *accountHolderType* and the FDID of the account from which the order was filled.

#	Step	Reported Event	Comments

		price: 10.01
		capacity: RA
		fulfillmentLinkType: YE
		clientDetails:
		    orderKeyDate:
		    20170801T000000
		    orderID: O12350
		    side: B
		firmDetails:
		    side:
		    firmDesignatedID:
		    accountHolderType:
		
		*Broker 1 reports an **Order Fulfillment event (3 of 3)***
		
		type: MEOF
		fillKeyDate: 20170801T000000
		fulfillmentID: FO55502
		symbol: XYZ
		eventTimestamp:
		20170801T143040.523456
		manualFlag: true
		electronicTimestamp:
		20170801T143040.523456
		quantity: 300
		price: 10.01
		capacity: RA
		fulfillmentLinkType: YE
		clientDetails:
		    orderKeyDate:
		    20170801T000000
		    orderID: O12355
		    side: B
		firmDetails:
		    side:
		    firmDesignatedID:
		    accountHolderType:	

2.4.   Internal Route Scenarios

This section illustrates the CAT reporting requirements when an order is passed to a different department or desk within a *CATReporterIMID*. Refer to Section 4.5 of the CAT Reporting Technical Specifications for Industry Members for additional information.

2.4.1. Customer Order Internally Routed to another Desk and Subsequently Executed Against a Firm Proprietary Account

This scenario illustrates the CAT reporting requirements when an Industry Member internally routes a customer order from the Sales Desk to the Trading Desk, and the order is subsequently executed against a firm proprietary account. The Sales Desk and Trading Desk are separated by information barriers.

Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The internal route from the Sales Desk to the Trading Desk (Order Internal Route Accepted event)
- The principal execution (Trade event)

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 (IMID = BRKA) reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: O side: B price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C123 accountHolderType: A	

#	Step	Reported Event	Comments
		affiliateFlag: false infoBarrierID: AB12 negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 internally routes the order from the Sales Desk to the Trading Desk	*Broker 1 reports an **Order Internal Route Accepted event*** type: MEIR orderKeyDate: 20170801T000000 orderID: O999 symbol: XYZ parentOrderKeyDate: 20170801T000000 parentOrderID: O12345 eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: T receivingDeskType: T infoBarrierID: CD34 side: B price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	The Trading Desk, upon receipt of the internal route, assigns a new Order Key with *orderID* O999. The Parent Order Key with *orderID* O12345 must be populated in the *parentOrderID* field. The Parent Order Key links the Order Internal Route Accepted event with the New Order event.
4	The Trading Desk fills the customer on a Principal basis	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20170801T000000 tradeID: TO999 symbol: XYZ eventTimestamp: 20170801T143035.123456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 500 price: 10.01 capacity: P tapeTradeID: TRF9090 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20170801T000000	For this Trade event, the *buyDetails* reflect the details of customer order O999. The *sellDetails* capture the FDID of the firm proprietary account from which the customer order was filled.

#	Step	Reported Event	Comments
		orderID: O999 side: B sellDetails: side: SL firmDesignatedID: P123 accountHolderType: P	

2.4.2. Customer Order Internally Routed to Multiple Desks and Subsequently Executed

This scenario illustrates the CAT reporting requirements when an Industry Member internally routes a customer order from the Sales Desk to multiple desks within the Industry Member. Each destination desk subsequently fills the order against a firm proprietary account.
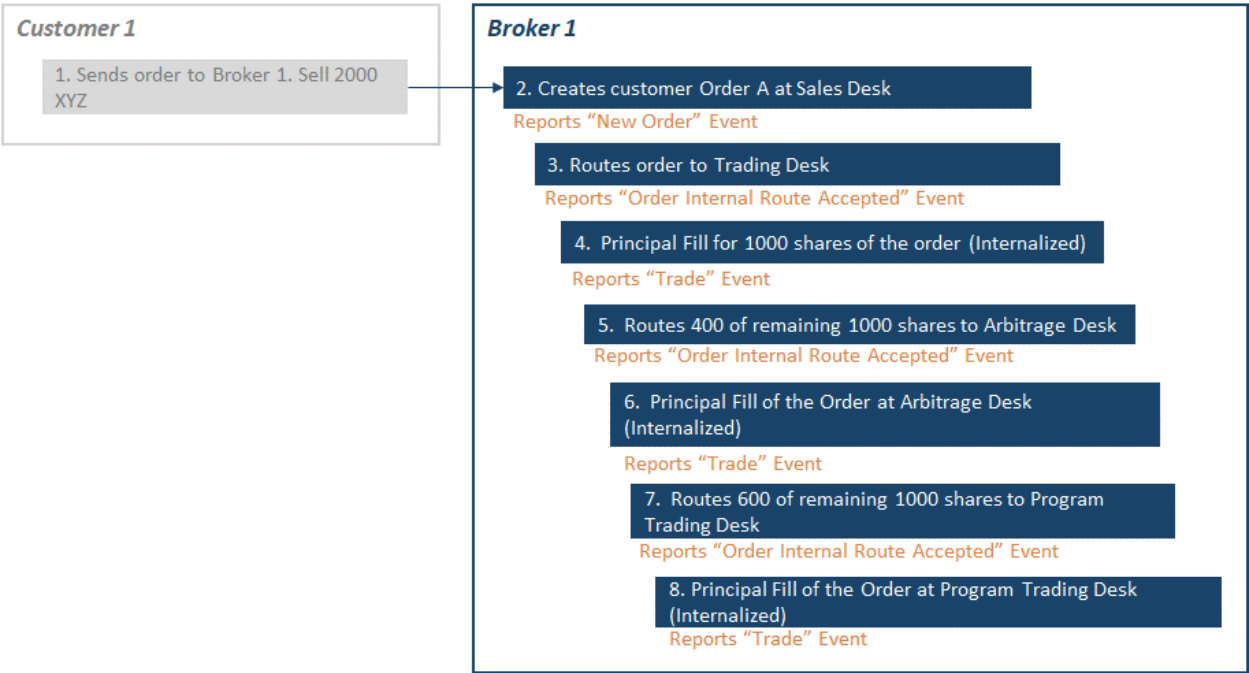
Industry Member Broker 1 is required to report the following for each desk:

- At the Sales Desk
  - ☷ The receipt of the customer order (New Order event)
- At the Trading Desk
  - ☷ The receipt of the internal route from the Sales Desk (Order Internal Route Accepted event)
  - ☷ The principal execution (Trade event)
- At the Arbitrage Desk

- ɯ The receipt of the internal route from the Sales Desk (Order Internal Route Accepted event)
- ɯ The principal execution (Trade event)
  - · At the Program Trading Desk
    - ɯ The receipt of the internal route from the Sales Desk (Order Internal Route Accepted event)
    - ɯ The principal execution (Trade event)

#	Step	Reported Event	Comments
1	Customer sends a Sell order to Broker 1	*NA*	
2	Broker 1 accepts the customer order at the Sales Desk	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: O side: SL price: 10.02 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C5678 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 internally routes the order from the Sales Desk to the Trading Desk	*Broker 1 reports an **Order Internal Route Accepted event*** type: MEIR orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ parentOrderKeyDate: 20170801T000000 parentOrderID: O11111 eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: T receivingDeskType: T	The Trading Desk, upon receipt of the internal route, assigns a new Order Key with *orderID* O9996. The Parent Order Key with *orderID* O11111 must be populated in the *parentOrderID* field. The Parent Order Key links the Order Internal Route Accepted event with the New Order event.

#	Step	Reported Event	Comments
		side: SL price: 10.02 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	
4	The Trading Desk partially fills order O9996 on a Principal basis	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20170801T000000 tradeID: TO9996 symbol: XYZ eventTimestamp: 20170801T143035.123456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 10.02 capacity: P tapeTradeID: T9996 marketCenterID: DN sideDetailsInd: NA buyDetails: side: B firmDesignatedID: PROP246 accountHolderType: P sellDetails: orderKeyDate: 20170801T000000 orderID: O9996 side: SL	For this Trade event, the *sellDetails* reflect the details of customer order O9996. The *buyDetails* capture the FDID of the firm proprietary account from which the customer order was filled.
5	Broker 1 internally routes 400 of the remaining 1000 shares from the Sales Desk to the arbitrage desk	*Broker 1 reports an **Order Internal Route Accepted event*** type: MEIR orderKeyDate: 20170801T000000 orderID: O9997 symbol: XYZ parentOrderKeyDate: 20170801T000000 parentOrderID: O11111 eventTimestamp: 20170801T143036.123456 manualFlag: false deptType: T	The arbitrage desk, upon receipt of the internal route, assigns a new Order Key with *orderID* O9997. The Parent Order Key with *orderID* O11111 must be populated in the *parentOrderID* field. The Parent Order Key links the Order Internal Route Accepted event with the parent New Order event.

#	Step	Reported Event	Comments
		receivingDeskType: AR side: SL price: 10.02 quantity: 400 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	
6	The arbitrage desk fills order O9997 on a Principal basis.	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20170801T000000 tradeID: TO9997 symbol: XYZ eventTimestamp: 20170801T143037:122234 cancelFlag: false cancelTimestamp: manualFlag: false quantity: 400 price: 10.02 capacity: P tapeTradeID: T9997 marketCenterID: DN sideDetailsInd: NA buyDetails: side: B firmDesignatedID: PROP321 accountHolderType: P sellDetails: orderKeyDate: 20170801T000000 orderID: O9997 side: SL	For this Trade event, the *sellDetails* reflect the details of customer order O9997. The *buyDetails* capture the FDID of the firm proprietary account from which the customer order was filled.
7	Broker 1 internally routes the 600 remaining shares from the Sales Desk to the Program Trading Desk	*Broker 1 reports an **Order Internal Route Accepted event*** type: MEIR orderKeyDate: 20170801T000000 orderID: O1118 symbol: XYZ parentOrderKeyDate: 20170801T000000 parentOrderID: O11111 eventTimestamp: 20170801T143038.123456 manualFlag: false	The Program Trading Desk, upon receipt of the internal route, assigns a new Order Key with *orderID* O1118. The Parent Order Key with *orderID* O11111 must be populated in the *parentOrderID* field. The Parent Order Key links the Order Internal Route Accepted event with the parent New Order event.

#	Step	Reported Event	Comments
		deptType: T receivingDeskType: PT side: SL price: 10.02 quantity: 600 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	
8	The Program Trading Desk fills order O1118 on a Principal basis	*Broker 1 reports a* **Trade event** type: MEOT tradeKeyDate: 20170801T000000 tradeID: TO99981 symbol: XYZ eventTimestamp: 20170801T143038:125566 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 600 price: 10.02 capacity: P tapeTradeID: T9998 marketCenterID: DN sideDetailsInd: NA buyDetails: side: B firmDesignatedID: PROP555 accountHolderType: P sellDetails: orderKeyDate: 20170801T000000 orderID: O1118 side: SL	For this Trade event, the *sellDetails* reflect the details of customer order O1118. The *buyDetails* capture the FDID of the firm proprietary account from which the customer order was filled.

2.4.3. Internal Route and Execution, Leaves Quantity Routed Externally

This scenario illustrates the CAT reporting requirements when an Industry Member internally routes an order to another desk where it is partially executed. The remainder of the order is routed to another Industry Member for execution.
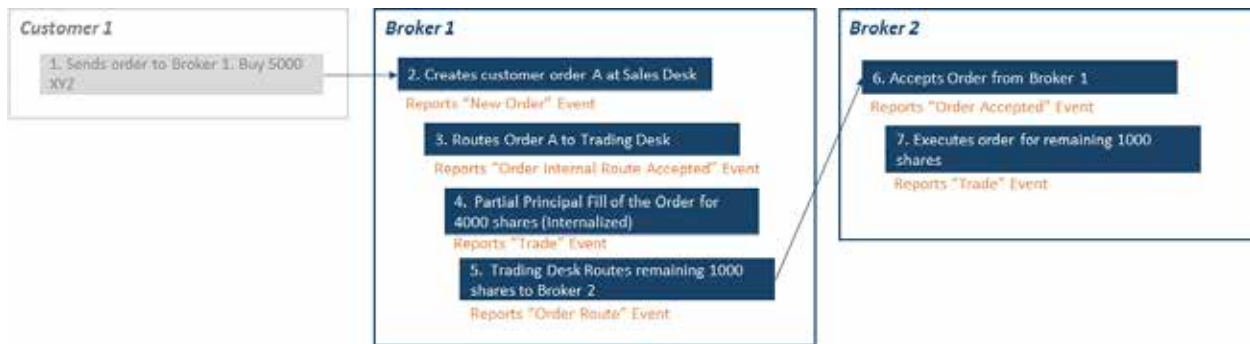
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The receipt of the internal route from the Sales Desk (Order Internal Route Accepted event)
- · The partial execution of the customer order (Trade event)
- · The route of the remaining shares to Broker 2 (Order Route event)

Industry Member Broker 2 is required to report:

- · Receipt of the order from Broker 1 (Order Accepted event)
- · The execution of Broker 1's order (Trade event)

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order at the Sales Desk	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: O side: B price: 10.01 quantity: 5000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C0001 accountHolderType: A affiliateFlag: false	

| #	Step	Reported Event	Comments
		negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 internally routes the order from the Sales Desk to the Trading Desk	*Broker 1 reports an **Order Internal Route Accepted event*** type: MEIR orderKeyDate: 20170801T000000 orderID: T12333 symbol: XYZ parentOrderKeyDate: 20170801T000000 parentOrderID: O34567 eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: T receivingDeskType: T side: B price: 10.01 quantity: 5000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	The Trading Desk, upon receipt of the internal route, assigns a new order ID T12333 to the order. This ID will be used to refer to the order in the subsequent trade event. The order ID from the New Order event, O34567, must be populated in the *parentOrderID* field. The *parentOrderID* links the Order Internal Route Accepted event with the New Order event.
4	The Trading Desk partially executes the order on a principal basis	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20170801T000000 tradeID: TO9123 symbol: XYZ eventTimestamp: 20170801T143032.123456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 4000 price: 10.01 capacity: P tapeTradeID: TRF1234 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20170801T000000 orderID: T12333 side: B sellDetails:	For this Trade event, the *buyDetails* reflect the details of customer order T12333. The *sellDetails* capture the FDID of the firm proprietary account from which the customer order was filled.

#	Step	Reported Event	Comments
		side: SL firmDesignatedID: PROP123 accountHolderType: P	
5	Broker 1 routes the leaves quantity to Broker 2	Broker 1 reports an *Order Route event* type: MEOR orderKeyDate: 20170801T000000 orderID: T12333 symbol: XYZ eventTimestamp: 20170801T143033.123456 manualFlag: false senderIMID: BRKA destination: FIRMB destinationType: F routedOrderID: FA12333 side: B price: 10.01 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
6	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20170801T000000 orderID: B12345 symbol: XYZ eventTimestamp: 20170801T143033.523456 manualFlag: false receiverIMID: FIRMB senderIMID: BRKA senderType: F routedOrderID: FA12333 affiliateFlag: false deptType: T side: B price: 10.01 quantity: 1000 orderType: LMT timeInForce: DAY=20170801	

#	Step	Reported Event	Comments
		tradingSession: REG isoInd: NA custDspIntrFlag: false	
7	Broker 2 matches and executes Broker 1's buy order B12345 order against sell order C45678	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20170801T000000 tradeID: TXYZ001 symbol: XYZ eventTimestamp: 20170801T143034.253456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 10.01 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20170801T000000 orderID: B12345 side: B sellDetails: orderKeyDate: 20170801T000000 orderID: C45678 side: SL	

2.4.4. Order Received and Routed Manually, Electronically Captured at Subsequent Desk

This scenario illustrates the CAT reporting requirements when an order is received manually at a branch, then manually routed to the Trading Desk. Upon receipt, the Trading Desk immediately enters the order into an electronic order management system for further handling.

Industry Member Broker 1 is required to report:

- The manual receipt of the customer order (a New Order event)
- The manual receipt and subsequent electronic entry of the internal route from the branch (Order Internal Route Accepted event)
- The electronic route of the order to the exchange (Order Route event)

Industry Members are required to report both an *eventTimestamp* and an *electronicTimestamp* for orders that are received manually and subsequently entered into an electronic system. If the order was received and systematized simultaneously, the values for the *eventTimestamp* and the *electronicTimestamp* must be the same. If the order is not systematized, an *electronicTimestamp* is not required. Refer to CAT FAQ G4 for additional information.

#	Step	Reported Event	Comments
1	Customer calls an order to Broker 1	*NA*	
2	The branch receives the customer order and manually creates an order ticket	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: O24680 symbol: XYZ eventTimestamp: 20180417T153015.00 manualFlag: true electronicTimestamp: deptType: O side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG	The *eventTimestamp* on the New Order event must capture the time at which the customer called Broker 1 in step 1 (with granularity to at least seconds). *electronicTimestamp* is not required, since the order was never systematized by Broker 1 at the branch.

#	Step	Reported Event	Comments
		custDspIntrFlag: false firmDesignatedID: FDID00234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	The branch calls the order into the Trading Desk, which enters the order into an electronic system immediately upon receipt	*Broker 1 reports an **Order Internal Route Accepted event*** type: MEIR orderKeyDate: 20180417T000000 orderID: O24680 symbol: XYZ eventTimestamp: 20180417T153016.112345 manualFlag: true electronicTimestamp: 20180417T153016.112345 deptType: T receivingDeskType: T side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=~~20170801~~20180417 tradingSession: REG	The Trading Desk does not assign a new *orderID* to the Order Internal Route Accepted event. Since the Trading Desk received the order manually and subsequently entered the order into an electronic system, the Trading Desk is required to report both an *eventTimestamp* and an *electronicTimestamp.* However, since the Trading Desk simultaneously received and entered the order, the *eventTimestamp* and *electronicTimestamp* must reflect the same value.
4	The order is routed to EXCH1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O24680 symbol: XYZ eventTimestamp: 20180417T153016.112545 manualFlag: false senderIMID: BRKR1 destination: EXCH1 destinationType: E routedOrderID: RTO24680 session: s18 side: B price: 10.00 quantity: 1000 orderType: LMT	

#	Step	Reported Event	Comments
		timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
5	EXCH1 accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	

2.4.5. Industry Member Utilizes Multiple Systems at One Desk

This scenario illustrates the CAT reporting requirements when an Industry Member has multiple trading systems utilized at a single desk. In this scenario, the desk transfers the order into another internal application used within the desk in order to route the order to an exchange. Since the desk handling the order does not change, the Industry Member is not required to report movement of an order between two systems within the same desk or department.

Industry Member Broker 1 is required to report:

· The receipt of the customer order (New Order event)

· The route of the customer order to the exchange (Order Route event)

#	Step	Reported Event	Comments
1	Customer sends the order to Broker 1	*NA*	
2	Broker 1 accepts the customer order at Desk 1	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B	

#	Step	Reported Event	Comments
		price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST876 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Desk 1 transmits the order to a different internal system	*NA*	
4	Desk 1 routes the order to the exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.334456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: RT23456 session: s2 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
5	Exchange 1 accepts order from Broker 1	*NA*	

2.4.6. Order Internally Routed to another Desk and Subsequently Modified by a Customer

This scenario illustrates the CAT reporting requirements when an Industry Member internally routes a customer order from the Sales Desk to the Trading Desk, and the order is subsequently modified by the customer. In this scenario, the Sales Desk receives an order from a customer and routes the order to the Trading Desk, where the order is further routed to an exchange for execution. The customer subsequently sends an instruction to modify the price of the order. The Sales Desk modifies the customer order per the customer instruction, cancels the existing internal route to the Trading Desk, and sends a new internal route to the Trading Desk. The Trading Desk receives the new internal route from the Sales Desk, and further routes the modification to the exchange.

The reporting of this scenario depends on whether the Sales Desk retains the same *orderID* or assigns a new *orderID* to the modified order as described in the two options below.

Option 1:

In Option 1, the Sales Desk maintains the same *orderID* and modifies the internal route that was sent to the Trading Desk. In this scenario, the Trading Desk will be required to report an Order Internal Route Modified event reflecting the modification of the internal route received from the Sales Desk in Phase 2c.
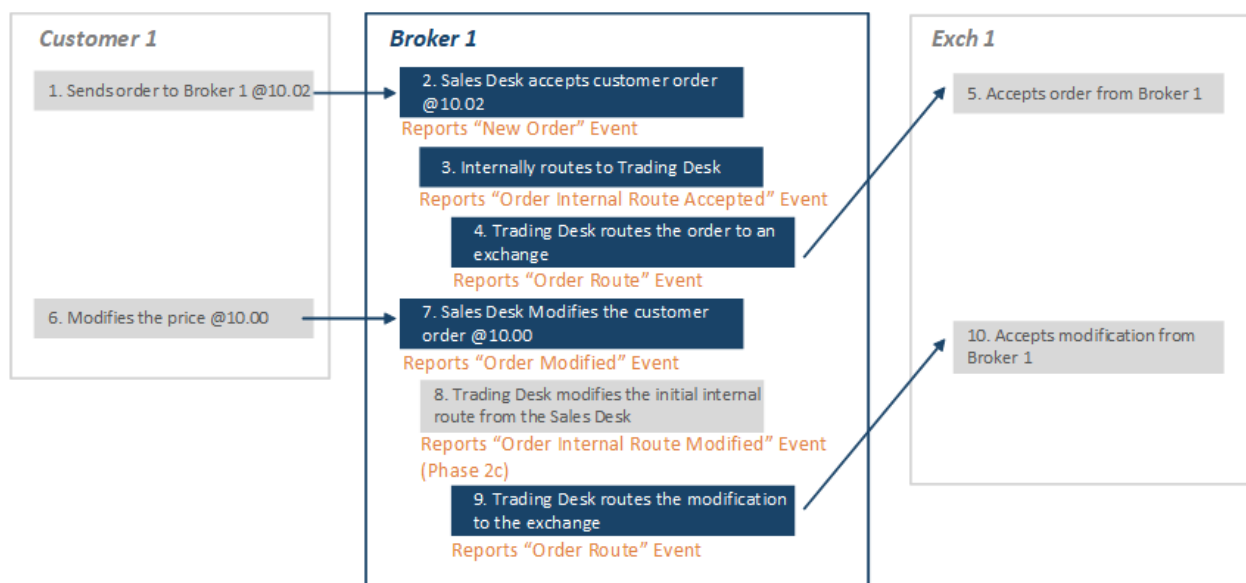
Industry Member Broker 1 is required to report the following for each desk in Phase 2a:

- At the Sales Desk
  - ᴡ The receipt of the customer order (New Order event)
  - ᴡ The modification of the customer order (Order Modified event where the Sales Desk maintains the same *orderID*)

- At the Trading Desk
    - The receipt of the internal route from the Sales Desk (Order Internal Route Accepted event)
    - The route of the order to the exchange (Order Route event)
    - The route of the modification to the exchange (Order Route event)

Option 2:

In Option 2, the Sales Desk assigns a new *orderID* and sends a new internal route to the Trading Desk. In this scenario, the Trading Desk will be required to report an Order Internal Route Cancelled event reflecting the cancellation of the initial internal route received from the Sales Desk in Phase 2c.
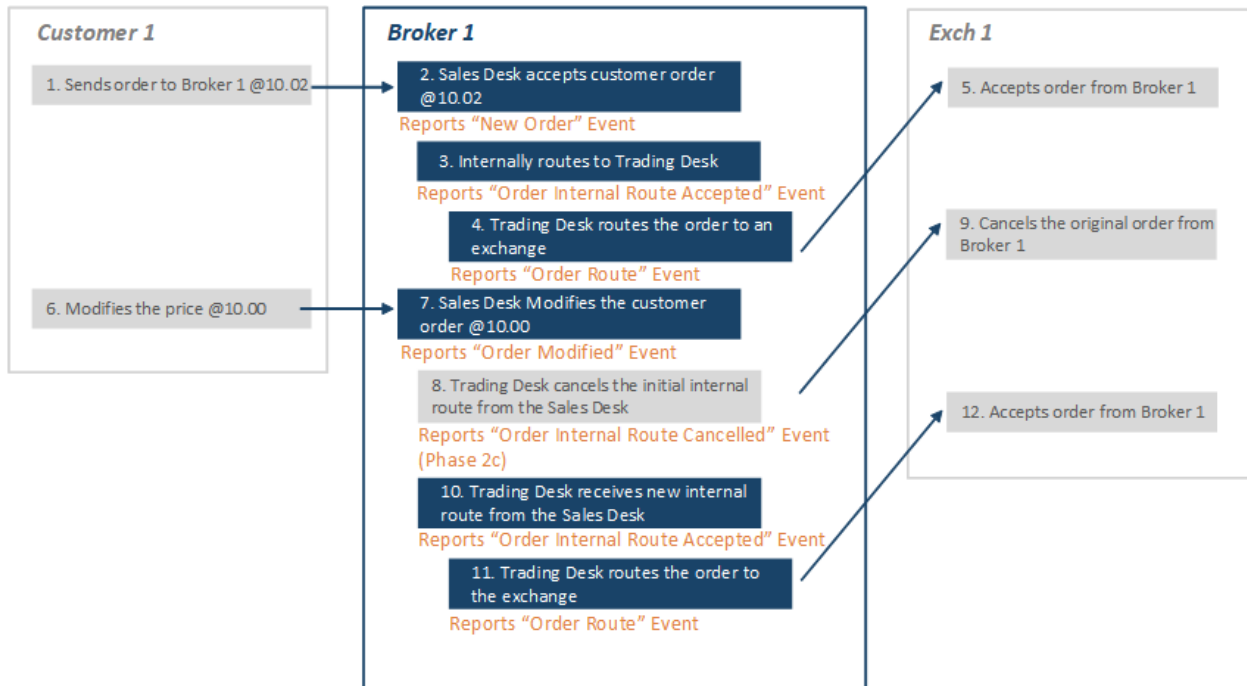
Industry Member Broker 1 is required to report the following for each desk in Phase 2a:

- At the Sales Desk
    - The receipt of the customer order (New Order event)
    - The modification of the customer order (Order Modified event where the Sales Desk assigns a new *orderID*)
- At the Trading Desk
    - The receipt of each internal route from the Sales Desk (Order Internal Route Accepted event)
    - The route of each order to the exchange (Order Route event)

#	Step	Reported Event	Comments
1	Customer sends a Sell order to Broker 1	*NA*	

#	Step	Reported Event	Comments
2	Broker 1 accepts the customer order at the Sales Desk	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: O side: SL price: 10.02 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C5678 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	If the Sales Desk creates a child order, the Sales Desk would also report a Child Order event.
3	Broker 1 internally routes the order from the Sales Desk to the Trading Desk	*Broker 1 reports an **Order Internal Route Accepted event*** type: MEIR orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ parentOrderKeyDate: 20170801T000000 parentOrderID: O11111 eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: T receivingDeskType: T side: SL price: 10.02 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	The Trading Desk, upon receipt of the internal route, assigns a new Order Key with *orderID* O9996. The Parent Order Key with *orderID* O11111 must be populated in the *parentOrderID* field. The Parent Order Key links the Order Internal Route Accepted event with the New Order event.
4	The Trading Desk routes the order to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ	

| #	Step	Reported Event		Comments
		eventTimestamp: 20170801T143032.123456 manualFlag: false senderIMID: BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12350 session: 1109 side: SL price: 10.02 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA		
5	Exchange 1 accepts the order	*Exchange 1 reports a Participant **Order Accepted event***		
6	Customer modifies the price of the order	*NA*		
7	Sales Desk modifies the price of the order per the customer's instruction	***Option 1*** *Broker 1 reports an **Order Modified event** with the same orderID* type: MEOM orderKeyDate: 20170801T000000 orderID: O11111 symbol: XYZ priorOrderKeyDate: priorOrderID: eventTimestamp: 20170801T143035.123456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: SL price: 10.00 quantity: 2000 leavesQty: 2000 orderType: LMT	***Option 2*** *Broker 1 reports an **Order Modified event** with a new orderID* type: MEOM orderKeyDate: 20170801T000000 orderID: OM11111 symbol: XYZ priorOrderKeyDate: 20170801T000000 priorOrderID: O11111 eventTimestamp: 20170801T143035.123456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: SL price: 10.00 quantity: 2000 leavesQty: 2000 orderType: LMT	Since only the limit price was modified a MEOJ event could have alternatively been reported. If the Sales Desk creates a child order, the Sales Desk would also report a Child Order event.

#	Step	Reported Event		Comments
		timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false	timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false	
8	The Sales Desk informs the Trading Desk of the change in price.	*NA*		In Phase 2a, the Sales Desk is not required to report the cancellation or modification of the internal route to the Trading Desk, as route cancellations and modifications are not CAT reportable events.
9	Trading Desk modifies the order per the Sales Desk's instructions	***Option 1*** *Broker 1 reports an **Order Internal Route Modified** event in Phase 2c*	***Option 2*** *Broker 1 reports an **Order Internal Route Cancelled** event in Phase 2c* *Broker 1 reports an **Order Internal Route Accepted** event* type: MEIR orderKeyDate: 20170801T000000 orderID: O9998 symbol: XYZ parentOrderKeyDate: 20170801T000000 parentOrderID: OM11111 eventTimestamp: 20170801T143035.623456 manualFlag: false deptType: T receivingDeskType: T side: SL price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	In Option 1, since the Sales Desk did not assign a new *orderID*, the Trading Desk will be required to report an Order Internal Route Modified event in Phase 2c reflecting the modification received from the Sales Desk. In Option 2, since the Sales Desk assigned a new *orderID*, the Trading Desk will be required to report the receipt of a new internal route. In Phase 2c, the Trading Desk will be required to report an Order Internal Route Cancelled event reflecting the cancellation received from the Sales Desk.
10	Trading Desk routes the order/modification to the exchange	***Option 1*** *Broker 1 reports an **Order Route event***	***Option 2*** *Broker 1 reports an **Order Route event***	In Option 1, Broker 1 reports the route of the modification received from the Sales Desk by

#	Step	Reported Event		Comments
		type: MEOR orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ eventTimestamp: 20170801T143035.623456 manualFlag: false senderIMID: BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12360 session: 1109 side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	type: MEOR orderKeyDate: 20170801T000000 orderID: O9998 symbol: XYZ eventTimestamp: 20170801T143035.623456 manualFlag: false senderIMID: BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12360 session: 1109 side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	the Trading Desk. In Option 2, Broker 1 reports the route of the new order received from the Sales Desk by the Trading Desk.
11	Exchange 1 receives the instructions from the Trading Desk	***<u>Option 1</u>*** *Exchange 1 reports a Participant **Order Modified event***	***<u>Option 2</u>*** *Exchange 1 reports a Participant **Order Cancelled event** and **Order Accepted event***	In Option 1, the exchange reports that it received the modification from the Trading Desk. In Option 2, the exchange reports that it received the cancellation of the original order from the Trading Desk, followed by the receipt of a new order.

2.4.7. Order Internally Routed to another Desk and Subsequently Modified by the Firm

This scenario illustrates the CAT reporting requirements when an Industry Member internally routes a customer order from the Sales Desk to the Trading Desk, and the order is subsequently modified by the Sales Desk. In this scenario, the Sales Desk receives an order from a customer and routes the order to the Trading Desk, where the order is further routed to an exchange for execution. The Sales Desk subsequently modifies the price of the internal route to the Trading Desk. The Trading Desk receives the price modification from the Sales Desk, and further routes the modification to the exchange.

The reporting of this scenario depends on whether the Sales Desk modifies the parent order or cancels the internal route as described in the two options below.

Option 1:

In Option 1, the Sales Desk is not required to report the modification of the internal route, as modifications at the route level are not reportable to CAT. In this scenario, the Trading Desk will be required to report an Order Internal Route Modified event reflecting the receipt of the internal route modification from the Sales Desk in Phase 2c.

Industry Member Broker 1 is required to report the following for each desk:

- · At the Sales Desk
  - ⅏ The receipt of the customer order (New Order event)
- · At the Trading Desk
  - ⅏ The receipt of the internal route from the Sales Desk (Order Internal Route Accepted event)
  - ⅏ The route of the order to the exchange (Order Route event)
  - ⅏ The route of the modification to the exchange (Order Route event)

Option 2:

In Option 2, the Sales Desk is not required to report the modification of the internal route, as modifications at the route level are not reportable to CAT. In this scenario, the Trading Desk will be required to report an Order Internal Route Cancelled event reflecting the receipt of the initial internal route cancellation from the Sales Desk in Phase 2c.
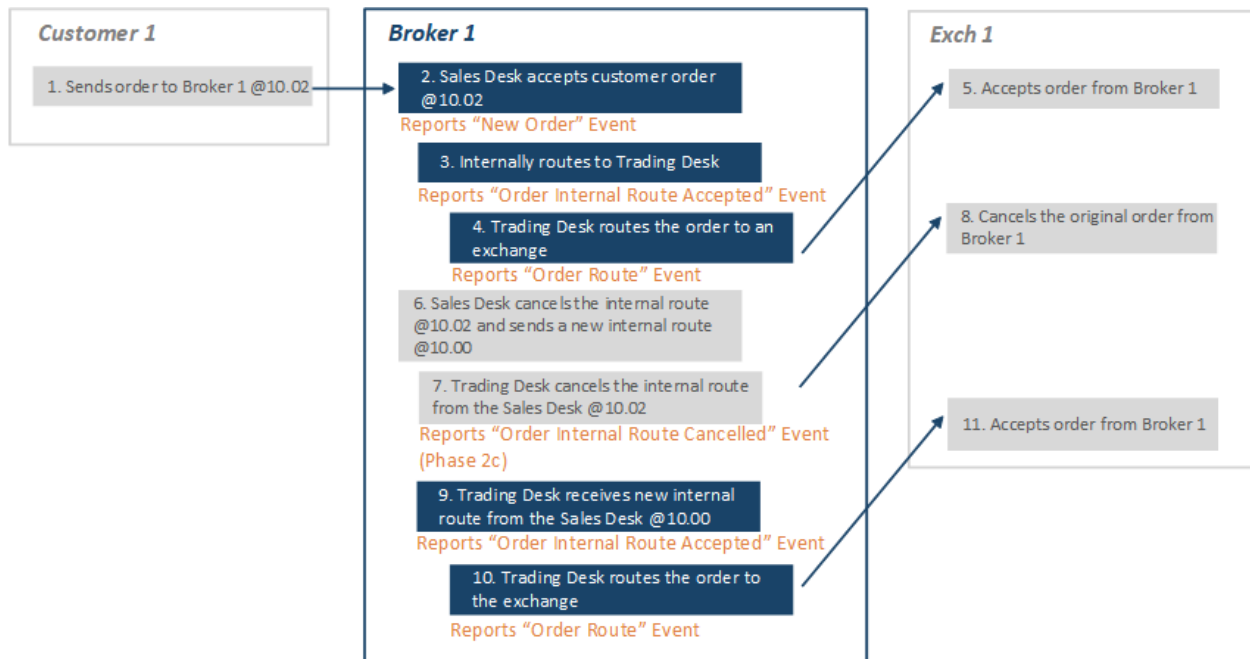
Industry Member Broker 1 is required to report the following for each desk:

- At the Sales Desk
  - The receipt of the customer order (New Order event)
- At the Trading Desk
  - The receipt of the initial internal route from the Sales Desk (Order Internal Route Accepted event)
  - The route of the order to the exchange (Order Route event)
  - The receipt of a second internal route from the Sales Desk (Order Internal Route Accepted event)
  - The route of the order to the exchange (Order Route event)

#	Step	Reported Event	Comments
1	Customer sends a Sell order to Broker 1	*NA*	
2	Broker 1 accepts the customer order at the Sales Desk	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20170801T143030.123456	

#	Step	Reported Event	Comments
		manualFlag: false deptType: O side: SL price: 10.02 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG handlingInstructions: NH custDspIntrFlag: false firmDesignatedID: C5678 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Sales Desk routes the order to the Trading Desk	*Broker 1 reports an **Order Internal Route Accepted event*** type: MEIR orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ parentOrderKeyDate: 20170801T000000 parentOrderID: O11111 eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: T receivingDeskType: T side: SL price: 10.02 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	The Trading Desk, upon receipt of the internal route, assigns a new Order Key with *orderID* O9996. The Parent Order Key with *orderID* O11111 must be populated in the *parentOrderID* field. The Parent Order Key links the Order Internal Route Accepted event with the New Order event.
4	Trading Desk routes the order to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ eventTimestamp: 20170801T143032.123456 manualFlag: false senderIMID: BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12350	

#	Step	Reported Event		Comments
		session: 1109 side: SL price: 10.02 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA		
5	Exchange 1 accepts the order	*Exchange 1 reports a Participant **Order Accepted event***		
6	Sales Desk modifies the price of the internal route	*NA*		The Sales Desk is not required to report the modification or cancellation of a route to CAT in Phase 2a.
7	Trading Desk modifies the order per the Sales Desk's instructions	**Option 1** *Broker 1 reports an **Order Internal Route Modified** event in Phase 2c*	**Option 2** *Broker 1 reports an **Order Internal Route Cancelled** event in Phase 2c* *Broker 1 reports an **Order Internal Route Accepted** event* type: MEIR orderKeyDate: 20170801T000000 orderID: O9998 symbol: XYZ parentOrderKeyDate: 20170801T000000 parentOrderID: O11111 eventTimestamp: 20170801T143035.123456 manualFlag: false deptType: T receivingDeskType: T side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	In Option 1, since the Trading desk received a modification of the internal route, the Trading Desk will be required to report an Order Internal Route Modified event in Phase 2c reflecting a modification to the internal route. In Option 2, since the Sales Desk cancelled the original internal route and sent a new internal route at a different price, the Trading Desk will be required to report the receipt of a new internal route. In Phase 2c, the Trading Desk will be required to report an Order Internal Route Cancelled event reflecting the receipt of the internal cancellation.

#	Step	Reported Event		Comments
8	Trading Desk routes the order/modification to the exchange	**_Option 1_** _Broker 1 reports an **Order Route event**_ type: MEOR orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ eventTimestamp: 20170801T143035.623456 manualFlag: false senderIMID: BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12360 session: 1109 side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	**_Option 2_** _Broker 1 reports an **Order Route event**_ type: MEOR orderKeyDate: 20170801T000000 orderID: O9998 symbol: XYZ eventTimestamp: 20170801T143035.623456 manualFlag: false senderIMID: BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12360 session: 1109 side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	In Option 1, Broker 1 reports the route of the modification received from the Sales Desk by the Trading Desk. In Option 2, Broker 1 reports the route of the new order received from the Sales Desk by the Trading Desk.
9	Exchange 1 receives the instructions from the Trading Desk	**_Option 1_** _Exchange 1 reports a Participant **Order Modified event**_	**_Option 2_** _Exchange 1 reports a Participant **Order Cancelled event** and **Order Accepted event**_	In Option 1, the exchange reports that it received the modification from the Trading Desk. In Option 2, the exchange reports that it received the cancellation of the original order from the Trading Desk, followed by the receipt of a new order.

2.5. Order Modification Scenarios

This section illustrates the CAT reporting requirements when the Material Terms of an order have been changed, or when an order is cancel/replaced. Refer to Section 4.7 of the CAT Reporting Technical Specifications for Industry Members for additional information.

2.5.1. Customer Order and Modifications

This scenario illustrates the CAT reporting requirements when a customer places an order with an Industry Member and modifies the order multiple times.
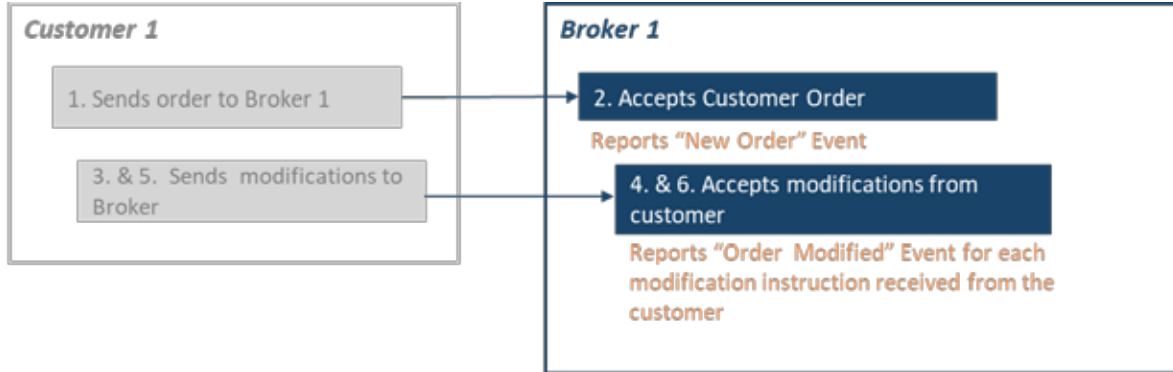
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The customer modifications (Order Modified event for each modification instruction)

Based on its order handling practices, the Industry Member may choose to assign a new Order Key to its Order Modified events by assigning a new *orderID*. The steps shown below illustrate how Order Modified events must be reported in scenarios where a new Order Key is assigned (Option 1), and in scenarios where a new Order Key is not assigned (Option 2).

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ eventTimestamp: 20180417T143030.234456 manualFlag: false deptType: T side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: IN004	

#	Step	Reported Event		Comments
		accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N		
3	Customer sends the modification request to the Broker 1	*NA*		
4	The customer order is modified at the firm	***OPTION 1*** *Broker 1 reports an **Order Modified event** using a new Order Key* type: MEOM orderKeyDate: 20180417T000000 orderID: OM12322 symbol: XYZ priorOrderKeyDate: 20180417T0000000 priorOrderID: O12321 eventTimestamp: 20180417T143035.236456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: B price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false	***OPTION 2*** *Broker 1 reports an **Order Modified event** using the same Order Key* type: MEOM orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ priorOrderKeyDate: priorOrderID: eventTimestamp: 20180417T143035.236456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: B price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false	If a new Order Key is assigned, the Prior Order Key with *orderID* O12321 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with the New Order event. If no new Order Key is assigned, the Prior Order Key fields must be left blank, and the Order Modified event will be linked to the New Order event using the Order Key. Since the modification was received from a non-CAT reporting customer, the *receiverIMID, senderIMID, senderType,* and *routedOrderID* fields are not required. Note that, since the change to the order was only to the limit price, an MEOJ event could have alternatively been used to report the customer order modification.
5	Customer sends another modification request to the Broker 1	*NA*		
6	The customer order is modified at the firm	***OPTION 1***	***OPTION 2***	If a new Order Key is assigned, the Prior Order Key with *orderID*

#	Step	Reported Event		Comments
		Broker 1 reports an Order Modified event using a new Order Key type: MEOM orderKeyDate: 20180417T000000 orderID: OM12323 symbol: XYZ priorOrderKeyDate: 20180417T0000000 priorOrderID: OM12322 eventTimestamp: 20180417T143041.046151 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: B price: 10.01 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false	*Broker 1 reports an Order Modified event using the same Order Key* type: MEOM orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ priorOrderKeyDate: priorOrderID: eventTimestamp: 20180417T143041.046151 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: B price: 10.01 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false	OM12322 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with the previous Order Modified event. If no new Order Key is assigned, the Prior Order Key fields must be left blank, and the Order Modified event will be linked to the New Order event using the Order Key. Note that, since the change to the order was only to the limit price, an MEOJ event could have alternatively been used to report the customer order modification.

2.5.2. Customer Initiated Modification of an Order Previously Routed to an Exchange

This scenario illustrates the CAT reporting requirements when a customer initiates a modification on an order that the Industry Member had previously routed to an exchange.

Industry Member Broker 1 is required to report:

- · The receipt of customer order (New Order event)
- · The route to the exchange (Order Route event)
- · The customer modification (Order Modified event)
- · The route of the modification to the exchange (Order Route event)

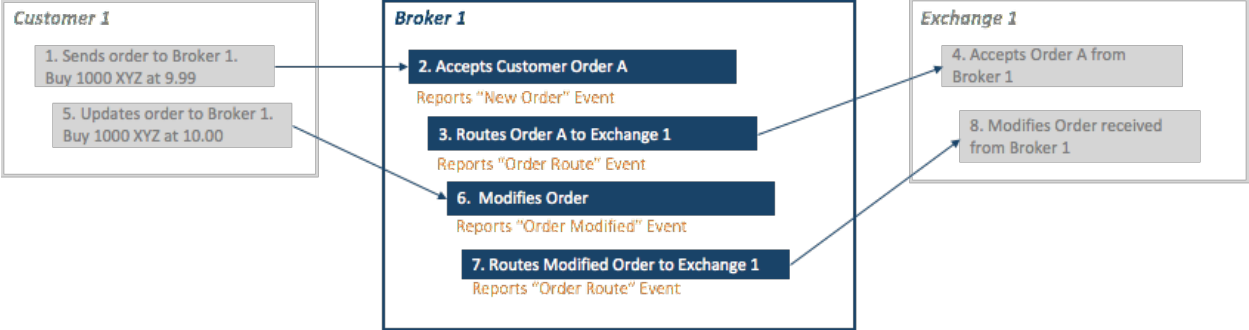| #	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ eventTimestamp: 20180417T143030.234456 manualFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: IN004 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to EXCH1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ eventTimestamp: 20180417T143030.236456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: RTAO12321	

#	Step	Reported Event	Comments
		session: s6 side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
4	EXCH1 accepts the order from Broker 1	*Exchange 1 reports a Participant **Order Accepted event***	
5	Customer initiates the modification	*NA*	
6	Broker 1 modifies the customer order per the customer's instructions	*Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: OM12322 symbol: XYZ priorOrderKeyDate: 20180417T000000 priorOrderID: O12321 eventTimestamp: 20180417T143031.236456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: B price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false	Upon receipt of the modification, Broker 1 assigns a new Order Key with *orderID* OM12322. The Prior Order Key with *orderID* O12321 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with the New Order event. Since the modification was received from a non-CAT reporting customer, the *receiverIMID, senderIMID, senderType,* and *routedOrderID* fields are not required
7	Broker 1 routes the modification to EXCH1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: OM12322 symbol: XYZ	

#	Step	Reported Event	Comments
		eventTimestamp: 20180417T143031.254456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: RTAO555 session: s6 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
8	EXCH1 updates the order	*Exchange 1 reports a Participant **Order Modified event***	

2.5.3. Customer Initiated Modification of Order Previously Routed to another Industry Member

This scenario illustrates the CAT reporting requirements when a customer initiates a modification on an order that was previously routed to another Industry Member.

Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the order to Broker 2 (Order Route event)
- · The customer modification (Order Modified event)
- · The route of the modification to Broker 2 (Order Route event)

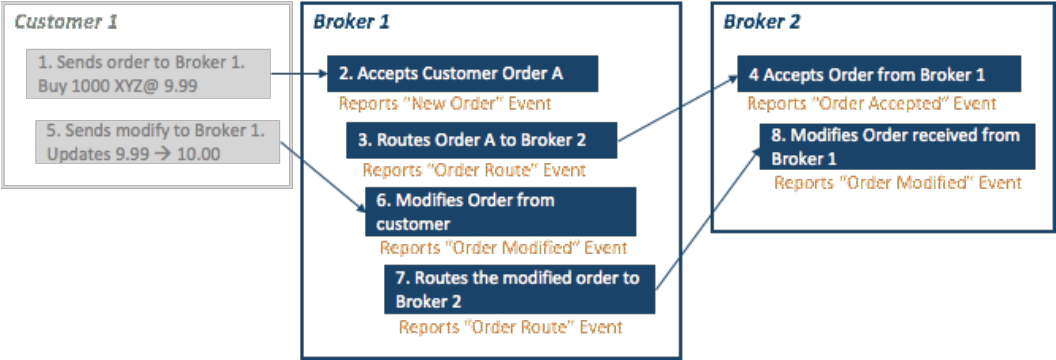Industry Member Broker 2 is required to report:

· The receipt of the order from Broker 1 (Order Accepted event)

· The modification from Broker 1 (Order Modified event)

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234456 manualFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234556 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: AO222 side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417	

#	Step	Reported Event	Comments
		tradingSession: REG affiliateFlag: false isoInd: NA	
4	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T143035.323556 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: AO222 affiliateFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Customer initiates the modification	*NA*	Customer amends order to price of $10.00
6	Broker 1 modifies the order per the customer's instructions	*Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: O23456M symbol: XYZ priorOrderKeyDate: 20180417T000000 priorOrderID: O23456 eventTimestamp: 20180417T1430432.224333 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID:	Upon receipt of the modification, Broker 1 assigns a new Order Key with *orderID* O23456M. The Prior Order Key with *orderID* O23456 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with the New Order event. Since the modification was received from a non-CAT reporting customer, the *receiverIMID, senderIMID, senderType,* and *routedOrderID* fields are not required.

#	Step	Reported Event	Comments
		initiator: C side: B price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	
7	Broker 1 routes the modification to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456M symbol: XYZ eventTimestamp: 20180417T1430432.234333 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: MAO222 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
8	Broker 2 modifies the order per the customer's instructions	*Broker 2 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: O34567M symbol: XYZ priorOrderKeyDate: 20180417T000000 priorOrderID: O34567 eventTimestamp: 20180417T1430435.524333 manualFlag: false receiverIMID: FRMB	Upon receipt of the modification, Broker 1 assigns a new Order Key with *orderID* O34567M. The Prior Order Key with *orderID* O34567 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with the Order Accepted event.

#	Step	Reported Event	Comments
		senderIMID: FRMA senderType: F routedOrderID: MAO222 initiator: C side: B price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	

2.5.4. System Driven Modification of Previously Routed Order

This scenario illustrates the CAT reporting requirements when an Industry Member uses a trading algorithm[1], which modifies an order that was previously routed to another Industry Member. In this scenario, since the order modification was initiated by the trading algorithm and not by the original customer, the routing Industry Member Broker 1 does not need to report the modification to CAT, as the modification is captured by the receiving Industry Member Broker 2.
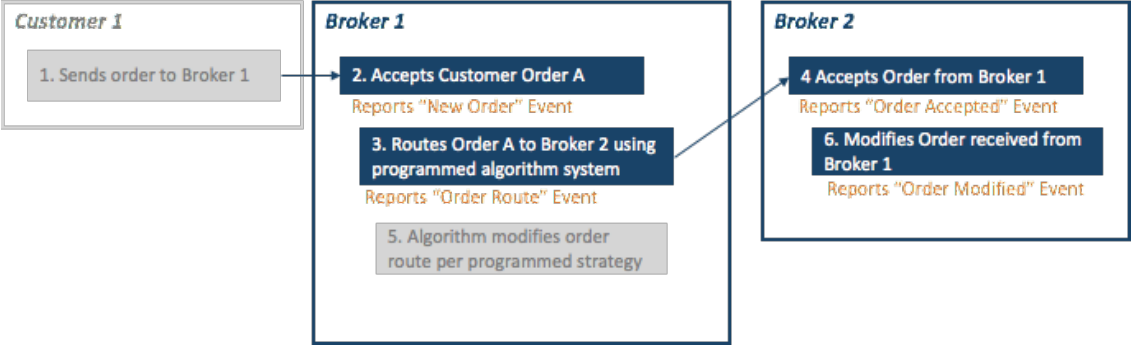
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the order to Broker 2 (Order Route event)

Industry Member Broker 2 is required to report:

- · The receipt of the order from Broker 1 (Order Accepted event)

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[1] Trading Algorithm is defined in Appendix F of the CAT Reporting Technical Specifications for Industry Members ("Technical Specifications")

· The modification from Broker 1 (Order Modified event)

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234456 manualFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PR001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes 500 shares of the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234556 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: AO222 side: B price: 9.98 quantity: 500 orderType: LMT timeInForce: GTT =20180417T143036.000000	In Phase 2c, Broker 1 will be required to populate 'SMT' in the *handlingInstructions* field to indicate that the order was routed out by a Smart Router.

#	Step	Reported Event	Comments
		tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
4	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T143035.323556 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: AO222 affiliateFlag: false deptType: A side: B price: 9.98 quantity: 500 orderType: LMT timeInForce: GTT=20180417T143036.000000 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Broker 1's trading algorithm reduces the quantity to 300 shares	*NA*	
6	Broker 2 modifies the order per Broker 1's instruction	*Broker 2 reports an **Order Modified event*** type: MEOM orderKeyDate: 20170417T000000 orderID: O34567M symbol: XYZ priorOrderKeyDate: 20170417T000000 priorOrderID: O34567 eventTimestamp: 20180417T143035.524333 manualFlag: false receiverIMID: FRMB	Upon receipt of the modification, Broker 1 assigns a new Order Key with *orderID* O34567M. The Prior Order Key with *orderID* O34567 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with the Order Accepted event.

#	Step	Reported Event	Comments
		senderIMID: FRMA	
		senderType: F	
		routedOrderID: AO223	
		initiator: C	
		side: B	
		price: 9.98	
		quantity: 300	
		leavesQty: 300	
		orderType: LMT	
		timeInForce: GTT=20180417T143036.000000	
		tradingSession: REG	
		isoInd: NA	
		custDspIntrFlag: false	

2.5.5. Manual Route, Followed by an Electronic Modification

This scenario illustrates Phase 2a reporting requirements when an Industry Member routes an order manually, then sends an electronic message to modify the Mmaterial Tterms of the order.
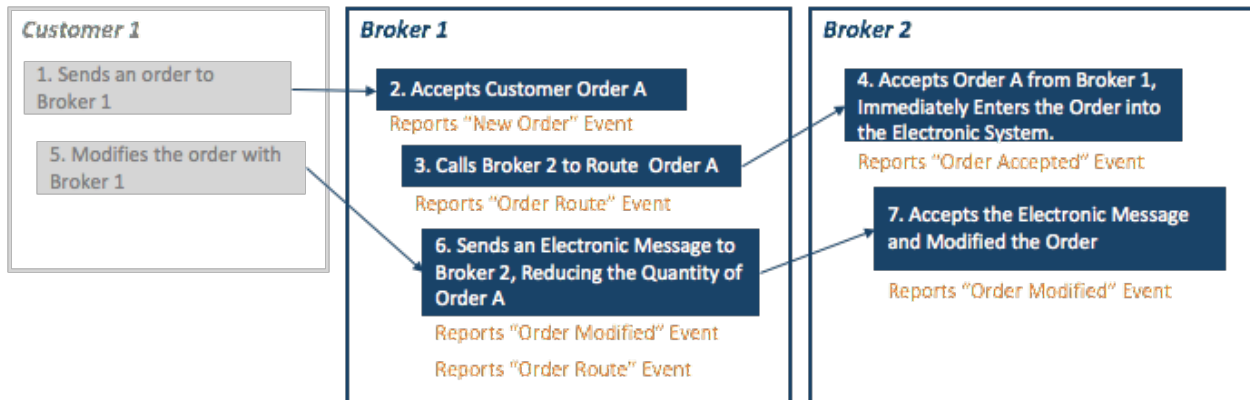
Industry Member Broker 1 is required to report:

· The electronic receipt of the customer order (New Order event)

· The manual route of the order to Broker 2 (Order Route event)

· The electronic customer modification (Order Modified event)

· The electronic route of the modification order to Broker 2 (Order Route event)

Industry Member Broker 2 is required to report:

· The manual receipt of the route from Broker 1 (Order Accepted event)

· The electronic modification from Broker 1 (Order Modified event)

Industry Members are required to report both an *eventTimestamp* and an *electronicTimestamp* for orders that are received manually and subsequently entered into an electronic system. If the order was received and systematized simultaneously, the values for the *eventTimestamp* and the *electronicTimestamp* must be the same. If the order is not systematized, an *electronicTimestamp* is not required. Refer to CAT FAQ G4 for additional information.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234456 manualFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 calls Broker 2 to route the order	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143058 manualFlag: true electronicTimestamp: senderIMID: BRK1 destination: BRK2 destinationType: F routedOrderID:	The *eventTimestamp* on the Order Route event must capture the time at which Broker 1 called Broker 2 in step 2 (with granularity to at least seconds). *electronicTimestamp* is not required, since the route was never systematized by Broker 1. *routedOrderID* is not required on orders routed manually.

#	Step	Reported Event	Comments
		side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
4	Broker 2 receives the order and immediately enters the order into an electronic system.	*Broker 2 reports an **Order Accepted event*** Type: MEOA orderKeyDate: 20180417T000000 orderID: B2O908 symbol: XYZ eventTimestamp: 20180417T143059.123456 manualFlag: true electronicTimestamp: 20180417T143059.123456 receiverIMID: BRK2 senderIMID: BRK1 senderType: F affiliateFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	Since Broker 2 received the order manually and subsequently entered the order into an electronic system, Broker 2 is required to report both an *eventTimestamp* and an *electronicTimestamp.* However, since Broker 2 simultaneously received and entered the order, the *eventTimestamp* and *electronicTimestamp* must reflect the same value.
5	Customer initiates the modification to reduce the order quantity.	NA	
6	Broker 1 electronically modifies the order per the customer's instructions, and routes the modification electronically to Broker 2	*Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: O34567M symbol: XYZ priorOrderKeyDate: 20187~~7~~0417T000000 priorOrderID: O23456	Upon receipt of the modification, Broker 1 assigns a new Order Key with *orderID* O34567M. The Prior Order Key with *orderID* O23456 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with the New Order event. Since the modification was received from a non-CAT reporting customer, the *receiverIMID, senderIMID,*

#	Step	Reported Event	Comments
		eventTimestamp: 20180417T143110.123456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: B price: 10.00 quantity: 900 leavesQty: 900 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false *Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O34567M symbol: XYZ eventTimestamp: 20180417T143110.129456 manualFlag: false senderIMID: BRKR1 destination: BRKB2 destinationType: F routedOrderID: RTO34567 side: B price: 9.99 quantity: 900 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	*senderType,* and *routedOrderID* fields are not required.
7	Broker 2 modifies the order per the customer's instructions.	*Broker 2 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: O99101 symbol: XYZ	Upon receipt of the modification, Broker 1 assigns a new Order Key with *orderID* O99101. The Prior Order Key with *orderID* B2O908 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with the Order Accepted event.

#	Step	Reported Event	Comments
		priorOrderKeyDate: 20180417T000000 priorOrderID: B2O908 eventTimestamp: 20180417T143110.140456 manualFlag: false receiverIMID: BRK2 senderIMID: BRK1 senderType: F routedOrderID: RTO34567 initiator: C price: 9.99 quantity: 900 leavesQty: 900 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	

2.5.6. Order Routing via Smart Router Provided by another Industry Member

This scenario illustrates the CAT reporting requirements when an introducing firm receives a customer order and enters it directly to a Smart Router provided by another Industry Member. The Smart Router provided by the Industry Member does not need to report to CAT when all of the following conditions apply:

1) The Industry Member providing the order routing system has no discretion over the order once it is entered into the Industry Member's order-routing system. The order routing destination ("Destination Market Center") must either be directed by the originating Industry Member or be subject to the pre-determined algorithm of the routing system agreed to by the originating Industry Member. The Industry Member providing the order routing system would have no involvement relating to the routing of the order, other than providing the routing mechanism.

2) The originating Industry Member must have established a relationship with the Destination Market Center, including meeting any and all applicable requirements to route orders to that destination. The originating Industry Member understands that the Industry Member providing the order routing system has no involvement with respect to the order in any way, except for providing a routing mechanism. No pre-established relationship between the Industry Member providing the order routing system and the Destination Market Center would be necessary for the originating Industry Member to access the routing destination.

3) The Destination Market Center views the order as coming directly from the originating Industry Member, not the Industry Member providing the order routing system, for all purposes, but not limited to, CAT reporting, trade reporting, applicable fees, etc.

4) The originating Industry Member, rather than the member providing the order routing system, identifies itself as the routing firm for purposes for the SEC Rule 606 (formerly SEC Rule 11Ac1-6).
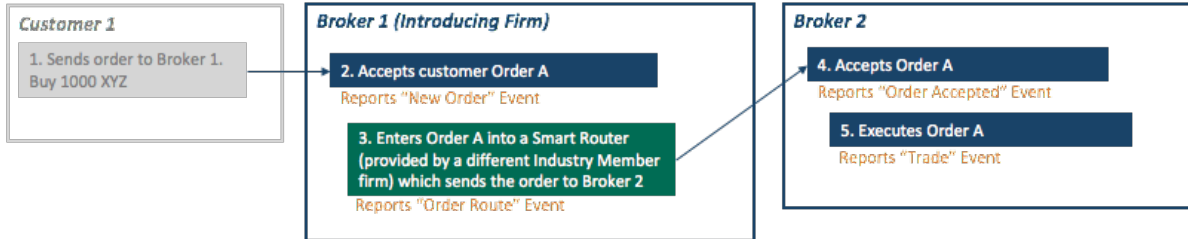
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the order through a Smart Router (Order Route event)

Industry Member Broker 2 is required to report:
- · The receipt of the order from Broker 1 (Order Accepted event)
- · The execution of the order (Trade event)

The Industry Member providing the order routing system is not required to report to CAT.

#	Step	Reported Event	Comments
1	Customer sends the order to Broker 1	*NA*	
2	Broker 1 (as the introducing firm) accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T151018.123456 manualFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417	

#	Step	Reported Event	Comments
		tradingSession: REG custDspIntrFlag: false firmDesignatedID: FDID358 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 enters the order into the smart router	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T151018.125456 manualFlag: false senderIMID: BRKR1 destination: BRKR2 destinationType: F routedOrderID: SR1112 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	In Phase 2c, Broker 1 will be required to populate 'SMT' in the *handlingInstructions* field to indicate that the order was routed out by a Smart Router.
4	Broker 2 accepts the order from Broker 1 via the smart router	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: B26789 symbol: XYZ eventTimestamp: 20180417T151018.155456 manualFlag: false receiverIMID: BRKR2 senderIMID: BRKR1 senderType: F routedOrderID: SR1112 affiliateFlag: false deptType: T	

| #	Step	Reported Event	Comments
		side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Broker 2 matches Broker 1's order with sell order B2O1234 and executes	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TB21567 symbol: XYZ eventTimestamp: 20180417T151018.255456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 10.00 capacity: A tapeTradeID: TRFB12321 sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: B26789 side: B sellDetails: orderKeyDate: 20180417T000000 orderID: B2O1234 side: SL	

2.5.7. Modification to an Order Previously Routed to an Exchange that requires the use of the Original Routed Order ID

This scenario illustrates CAT reporting requirements when an Industry Member routes an order to an exchange that requires the use of the original Routed Order ID for a modification to an order that was previously routed to that exchange. This scenario is only applicable to orders modified and resent to exchanges with a requirement to reuse the Routed Order ID. In these instances, the routing firm must designate on the Order Route event that the Routed Order ID is duplicated.

This reporting scenario applies to orders originated by the firm as well as orders received from customers and from other Industry Members. The example documented in this scenario represents an order originated by the firm.

Industry Member Broker 1 is required to report:

· The origination of a principal order (New Order event)

· The route to an exchange (Order Route event)

· The order modification (Order Modified event)

· The route of the modification to the exchange (Order Route event)

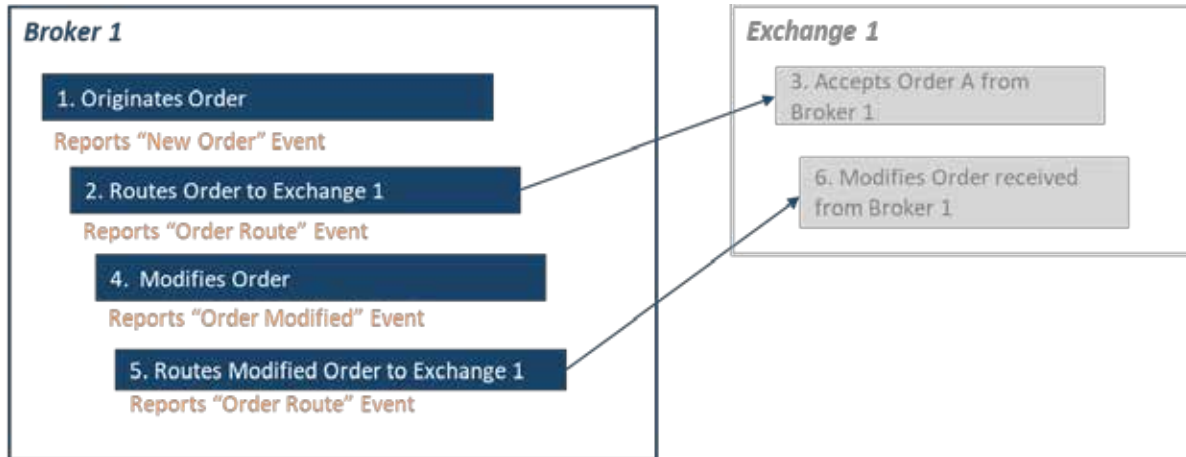| #	Step	Reported Event	Comments
1	Broker 1 originates order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O2500-0 symbol: XYZ eventTimestamp: 20180417T143030.234456 manualFlag: false deptType: T side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP55 accountHolderType: PA affiliateFlag: false negotiatedTradeFlag: false	

#	Step	Reported Event	Comments
		representativeInd: N	
2	Broker 1 routes the order to EXCH1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O2500-0 symbol: XYZ eventTimestamp: 20180417T143030.236456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: ROID-001 session: s6 side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA dupROIDCond: false	Since Broker 1 is routing the order to a national securities exchange, *session* must be populated.
3	EXCH1 accepts the order from Broker 1	*Exchange 1 reports a Participant **Order Accepted event***	
4	Broker 1 modifies the order	*Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: O2500-1 symbol: XYZ priorOrderKeyDate: 20180417T000000 priorOrderID: O2500-0 eventTimestamp: 20180417T143031.236456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: F side: B	~~Upon receipt of the modification,~~ Broker 1 modifies the order and assigns a new Order Key with *orderID* O2500-1. The Prior Order Key with *orderID* O2500-0 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with the New Order event.

#	Step	Reported Event	Comments
		price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false representativeInd: N	
5	Broker 1 routes the modification to EXCH1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O2500-1 symbol: XYZ eventTimestamp: 20180417T143031.254456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: ROID-001 session: s6 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA dupROIDCond: true	Since Broker 1 is routing to an exchange which requires the reuse of the original Routed Order ID: · The *routedOrderID* is populated with the same value as what was originally sent to the exchange · The *dupROIDCond* field is set to true. When true, CAT will allow the duplicated Route Linkage Key.
6	EXCH1 updates order	*Exchange 1 reports a Participant **Order Modified event***	

2.5.8.   Modification of a Multi-day Order

This scenario illustrates the CAT reporting requirements when a customer places an order with an Industry Member and modifies the order on a subsequent day.
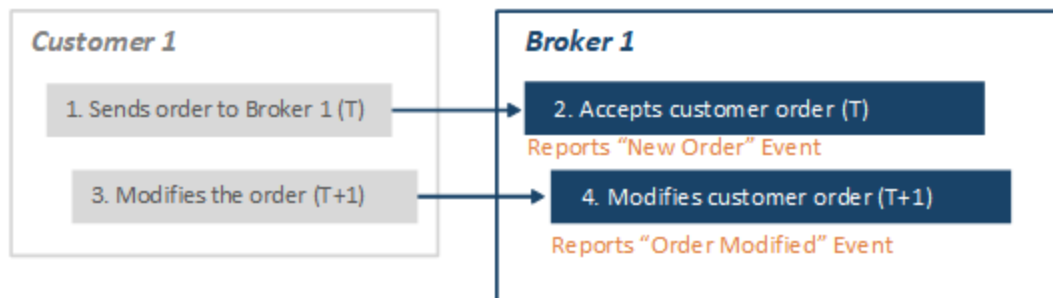
Industry Member Broker 1 is required to report:

- · The receipt of the customer order on T (New Order event)

- · The customer modification on T+1 (Order Modified event)

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ eventTimestamp: 20180417T143030.234456 manualFlag: false deptType: T side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: GTC tradingSession: REG custDspIntrFlag: false firmDesignatedID: IN004 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Customer sends the modification request to the Broker 1 on T+1	*NA*	
4	The customer order is modified at the firm on T+1	*Broker 1 reports an* **Order Modified event** type: MEOM	Upon receipt of the modification, Broker 1 assigns a new Order Key with *orderID* OM12322. The Prior Order Key with *orderID*

#	Step	Reported Event	Comments
		orderKeyDate: 20180418T000000 orderID: OM12322 symbol: XYZ priorOrderKeyDate: 20180417T0000000 priorOrderID: O12321 eventTimestamp: 20180418T143035.236456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: B price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: GTC tradingSession: REG custDspIntrFlag: false representativeInd: N	O12321 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with the New Order event. The *orderKeyDate* reflects the date and time that the new Order Key was assigned on T+1. The *priorOrderKeyDate* reflects the date and time that the Prior Order Key was assigned on T. Since the modification was received from a non-CAT reporting customer, the *receiverIMID, senderIMID, senderType,* and *routedOrderID* fields are not required.

2.5.9. Modification of a Customer Order Resulting in a Modification to the Corresponding Representative Order

This scenario illustrates the CAT reporting requirements when a customer modifies an order, which results in a modification to the corresponding representative order. In this example, Industry Member Broker 1 generates a representative order to facilitate the execution of a customer order, and routes the order to an exchange for execution. The customer subsequently modifies the limit price on its order, and Broker 1 updates the limit price on its corresponding representative order.
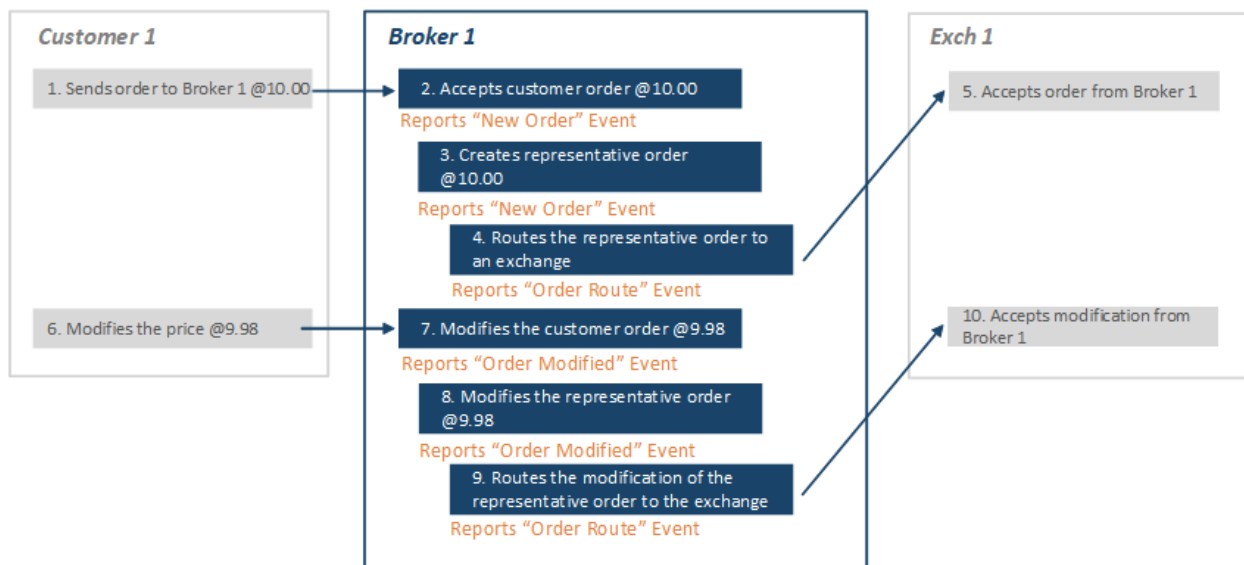
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The generation of a representative order (New Order event)
- The route of the representative order to an exchange (Order Route event)
- The receipt of the customer Modification (Order Modified event)
- The modification of the representative order (Order Modified Event)
- The route of the modification to the exchange (Order Route event)

In phase 2a, explicit linkage between the customer order and the representative order is required, since the representative order was originated specifically to represent a single customer order and there is: 1) an existing direct electronic link in the firm's system between the order being represented and the representative order, and 2) any resulting executions are immediately and automatically applied to the represented order in the firm's system.

#	Step	Reported Event	Comments
1	The customer sends an order to Broker 1	N/A	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false	

#	Step	Reported Event	Comments
		deptType: T side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C12345 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 generates a representative order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12350 symbol: XYZ eventTimestamp: 20170801T143030.623456 manualFlag: false deptType: T side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C0005 accountHolderType: P affiliateFlag: false aggregatedOrders: O12345@20170801T000000@@ negotiatedTradeFlag: false representativeInd: Y	The *representativeInd* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage is required in Phase 2a. The *aggregatedOrders* field must be populated.
4	Broker 1 routes the representative order to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O12350 symbol: XYZ	

#	Step	Reported Event	Comments
		eventTimestamp: 20170801T143031.123456 manualFlag: false senderIMID: BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12350 session: 1109 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
5	Exchange 1 accepts the order	*Exchange 1 reports a Participant **Order Accepted event***	
6	Customer sends a request to the Broker 1 to modify the limit price	*NA*	
7	Broker 1 modifies the limit price on the customer order per the customer instruction	*Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20170801T000000 orderID: OM12345 symbol: XYZ priorOrderKeyDate: 20170801T000000 priorOrderID: O12345 eventTimestamp: 20170801T143035.123456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: B price: 9.98 quantity: 500 leavesQty: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false	

#	Step	Reported Event	Comments
		representativeInd: N	
8	Broker 1 modifies the limit price on the corresponding representative order	*Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20170801T000000 orderID: OM12350 symbol: XYZ priorOrderKeyDate: 20170801T000000 priorOrderID: O12350 eventTimestamp: 20170801T143035.523456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: FG side: B price: 9.98 quantity: 500 leavesQty: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false aggregatedOrders: OM12345@20170801T000000@@ representativeInd: Y	The *representativeInd* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage is required in Phase 2a. The *aggregatedOrders* field must be populated, and must reflect the change in *orderID* of the related customer order.
9	Broker 1 routes the modification of the representative order to the exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: OM12350 symbol: XYZ eventTimestamp: 20170801T143035.823456 manualFlag: false senderIMID: BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12360 session: 1109 side: B	

#	Step	Reported Event	Comments
		price: 9.98 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
10	Exchange 1 accepts the modification	*Exchange 1 reports a Participant **Order Modified event***	

2.6. Cancellation Scenarios

This section illustrates the CAT reporting requirements when an order is fully or partially cancelled. Refer to Section 4.10 of the [CAT Reporting Technical Specifications for Industry Members](#) for additional information.

2.6.1. Full cancellation of a Customer Order

This scenario illustrates the CAT reporting requirements when a customer cancels an order placed with an Industry Member on the same day that it was created.

Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The customer cancellation (Order Cancelled event)
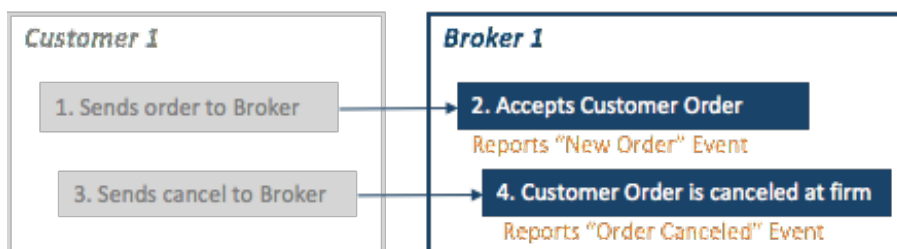
For illustration purposes, actions taken by the Broker between the receipt of the original order and the customer cancellation are not included.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO	

#	Step	Reported Event	Comments
		orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234456 manualFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Customer sends the cancel instruction to Broker 1	*NA*	
4	Broker 1 cancels the customer order	*Broker 1 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.323556 manualFlag: false cancelQty: 1000 leavesQty: 0 initiator: C	

2.6.2. Partial Cancellation of an Order

The following scenario illustrates the CAT reporting requirements when a customer partially cancels an order placed with an Industry Member on the same day that it was created. The Industry Member may report the partial cancellation using either an Order Cancelled event or an Order Modified event.
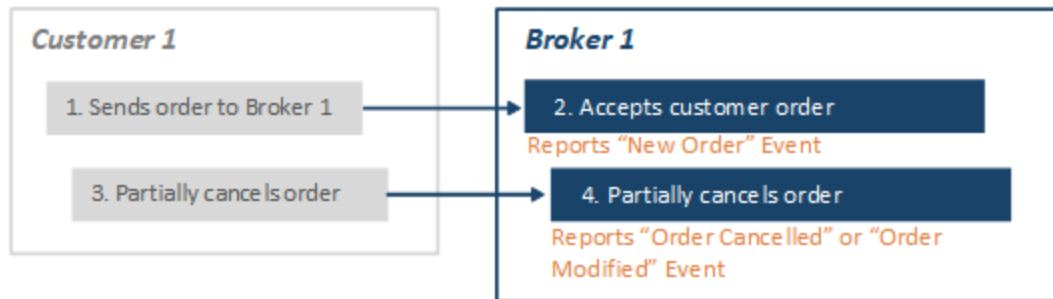
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The customer's partial cancellation (Order Cancelled or Order Modified event)

Based on its order handling practices, the Industry Member may choose to report this activity to CAT using either an Order Cancelled event or an Order Modified event. The steps shown below illustrate this activity must be reported in scenarios where an Order Cancelled event is reported (Option 1), and in scenarios where an Order Modified event is reported (Option 2).

#	Step	Reported Event	Comments
1	Customer sends the order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUS004 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Customer partially cancels	*NA*	

#	Step	Reported Event		Comments
	initial order			
4	Broker 1 partially cancels the order per the customer's instruction	**_OPTION 1_** _Broker 1 reports an **Order Cancelled event**_ type: MEOC orderKeyDate: 20180417T000000 orderID: O12345~~O45678~~ symbol: XYZ eventTimestamp: 20180417T153036.123456 manualFlag: false cancelQty: 400 leavesQty: 600 initiator: C	**_OPTION 2_** _Broker 1 reports an **Order Modified event**_ type: MEOM orderKeyDate: 20180417T000000 orderID: O12345~~O45678~~ symbol: XYZ priorOrderID: O12345 priorOrderKeyDate: 20180417T000000 eventTimestamp: 20180417T153038.234456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: B price: 10.00 quantity: 600 leavesQty: 600 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false representativeInd: N	

2.6.3. Partial Cancellation of a Partially Executed Order

The following scenario illustrates the CAT reporting requirements when a customer reduces the shares quantity on an order that has been partially executed. The Industry Member may choose to report the partial cancellation using either an Order Cancelled event or an Order Modified event b. Based on its order handling practices, ~~the Industry Member may choose to report this activity to CAT using either an Order Cancelled event or an Order Modified event.~~.

In this scenario, Industry Member Broker 1 receives a customer order for 1,000 shares, and routes the order to an exchange for execution. Broker 1 receives a partial execution of 200 shares on the exchange, then receives an instruction from the customer to reduce the shares quantity by 200 shares. Broker 1

receives another partial execution for 200 shares, then receives an instruction from the customer to reduce the quantity of the order to 400 shares, leaving the customer order as fully executed.

Reporting Option 1 (Order Cancelled events):
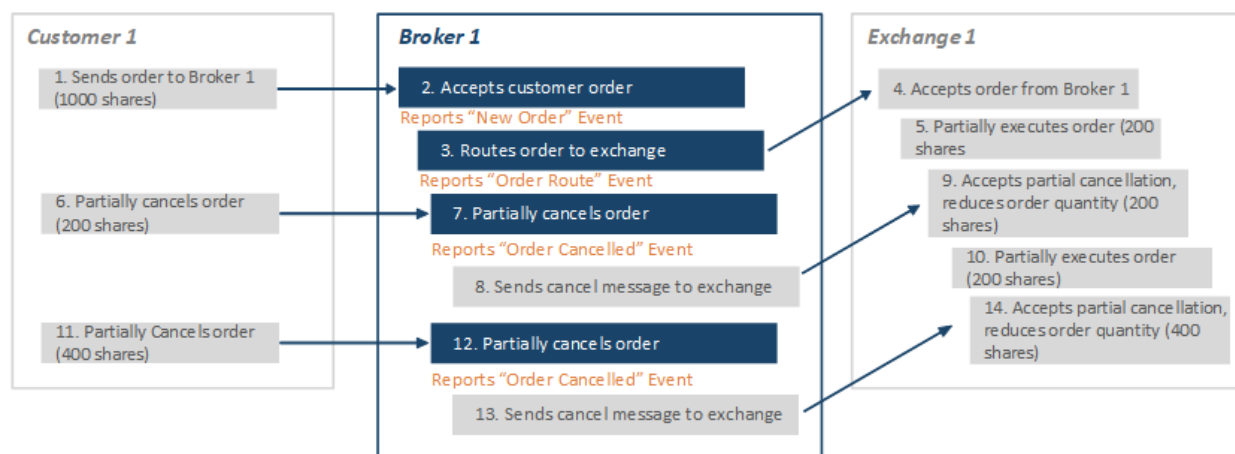
Reporting Option 2 (Order Modified events):
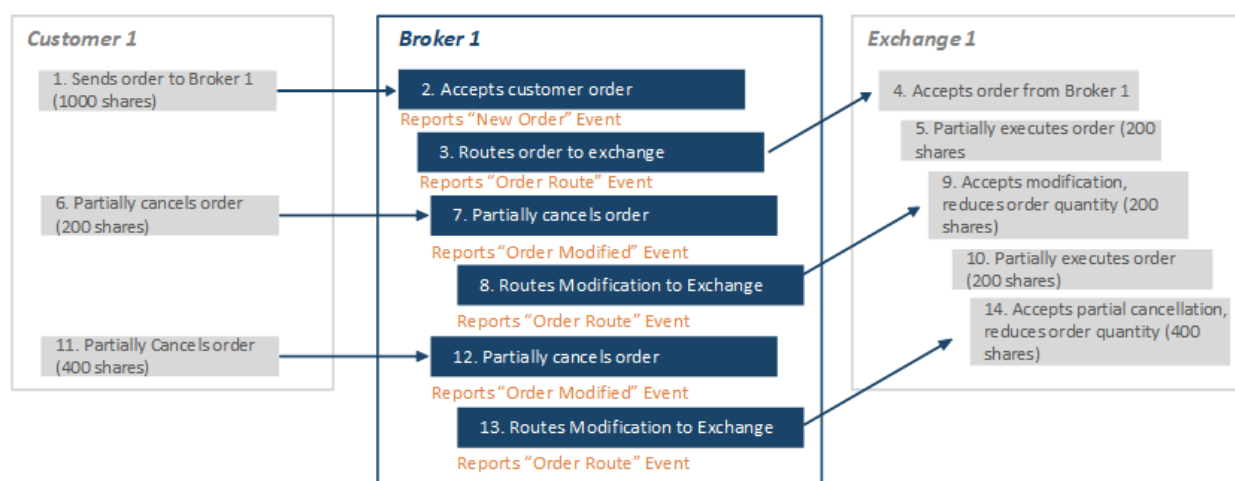
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The route to the exchange (Order Route event)
- Each of the customer's partial cancellations using one of the following options:
  - ʍ Option 1: Order Cancelled events
  - ʍ Option 2: Order Modified and Order Route events

Based on its order handling practices, the Industry Member may choose to report this activity using Order Cancelled events or Order Modified events. The steps shown below illustrate this activity must be reported in scenarios where an Order Cancelled event is reported (Option 1), and in scenarios where an Order Modified event is reported (Option 2).

#	Step	Reported Event	Comments
1	Customer sends the order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUS004 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153035.534456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: S5 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	

#	Step	Reported Event		Comments
4	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***		
5	Exch 1 executes 200 shares of the order	*Exch 1 reports a Participant **Trade event***		
6	Customer reduces the quantity of the order by 200 shares	*NA*		
7	Broker 1 reduces the quantity of the order by 200 shares per the customer's instruction	**OPTION 1** *Broker 1 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153036.123456 manualFlag: false cancelQty: 200 leavesQty: 600 initiator: C	**OPTION 2** *Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ priorOrderKeyDate: priorOrderID: eventTimestamp: 20180417T153036.534456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: B price: 10.00 quantity: 800 leavesQty: 600 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false representativeInd: N	The *leavesQty* should reflect that the original order for 1,000 shares was partially executed by 200 shares and then reduced by 200 shares, leaving 600 shares open on the order. In this example, Broker 1 maintains the same orderID throughout the entire order.
8	Broker 1 instructs the exchange to reduce the shares quantity of the order	**OPTION 1** *NA*	**OPTION 2** *Broker 1 reports an **Order Route event*** type: MEOR	When reporting this activity to CAT using Option 1, Broker 1 is not required to report that a cancel message was sent to the exchange. When reporting this

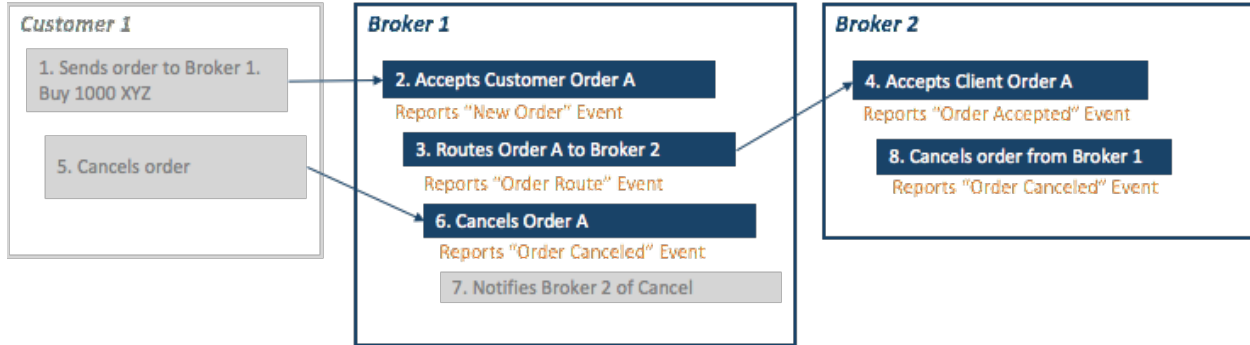| #	Step	Reported Event		Comments
			orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153036.834456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO558 session: S5 side: B price: 10.00 quantity: 800 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	activity to CAT using Option 2, Broker 1 must report the route of the modification to the exchange.
9	Exch 1 accepts the instruction to reduce the shares quantity from Broker 1	*Exch 1 reports a Participant **Order Cancelled event***	*Exch 1 reports a Participant **Order Modified event***	
10	Exch 1 executes 200 shares of the order	*Exch 1 reports a Participant **Trade event***		
11	Customer reduces the quantity of the order by 400 shares	*NA*		
12	Broker 1 reduces the quantity of the order by 400 shares per the customer's instruction	**OPTION 1** *Broker 1 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153037.123456 manualFlag: false cancelQty: 400	**OPTION 2** *Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ priorOrderKeyDate: priorOrderID: eventTimestamp: 20180417T153037.534456	The *leavesQty* should reflect that after the previous reduction leaving 600 shares open, the order was partially executed by 200 shares then reduced by 400 shares, leaving no shares open on the order.

#	Step	Reported Event		Comments
		leavesQty: 0 initiator: C	manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: B price: 10.00 quantity: 400 leavesQty: 0 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false representativeInd: N	
13	Broker 1 instructs the exchange to reduce the shares quantity of the order	***OPTION 1*** *NA*	***OPTION 2*** *Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153037.834456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO560 session: S5 side: B price: 10.00 quantity: 400 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
14	Exch 1 accepts the instruction to reduce the shares quantity from Broker 1	*Exch 1 reports a Participant **Order Cancelled event***	*Exch 1 reports a Participant **Order Modified event***	

2.6.4. Industry Member Cancels an Order Previously Routed to Another Industry Member

This scenario illustrates the CAT reporting requirements when a customer cancels an order that was previously routed to another Industry Member.

Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the customer order to Broker 2 (Order Route event)
- · The customer cancellation of the order (Order Cancelled event)

Industry Member Broker 2 is required to report:

- · The receipt of the order from Broker 1 (Order Accepted event)
- · The cancellation of the order (Order Cancelled event)

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1.	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O56575 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT	

#	Step	Reported Event	Comments
		timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUS1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O56575 symbol: XYZ eventTimestamp: 20180417T150335.244456 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: RO56575XYZ side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
4	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: OB12345 symbol: XYZ eventTimestamp: 20180417T150335.344456 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: RO56575XYZ affiliateFlag: false deptType: T	

#	Step	Reported Event	Comments
		side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Customer cancels the order	*NA*	
6	Broker 1 cancels the order per the customer's instruction	*Broker 1 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180417T000000 orderID: O56575 symbol: XYZ eventTimestamp: 20180417T150336.123456 manualFlag: false cancelQty: 1000 leavesQty: 0 initiator: C	
7	Broker 1 notifies Broker 2 that the order was cancelled	*NA*	
8	Broker 2 cancels the order per the customer's instruction	*Broker 2 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180417T000000 orderID: OB12345 symbol: XYZ eventTimestamp: 20180417T150336.423456 manualFlag: false cancelQty: 1000 leavesQty: 0 initiator: C	

2.6.5. Industry Member Cancels a Route to Another Industry Member

This scenario illustrates the CAT reporting requirements when an Industry Member cancels a route that was sent to another Industry Member. In this scenario, Industry Member Broker 1 routes an order to

Industry Member Broker 2. Broker 1 then cancels the route that was sent to Broker 2 and routes the order to Broker 3 where the order is executed.
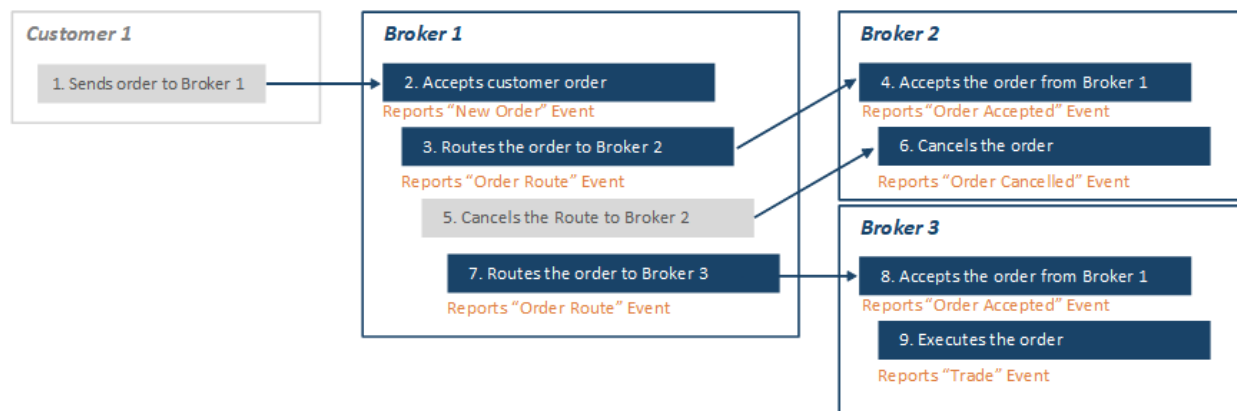
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The route of the customer order to Broker 2 (Order Route event)
- The route of the customer order to Broker 3 (Order Route event)

Industry Member Broker 2 is required to report:

- The receipt of the order from Broker 1 (Order Accepted event)
- The cancellation of Broker 1's order (Order Cancelled event)

Industry Member Broker 3 is required to report:

- The receipt of the order from Broker 1 (Order Accepted event)
- The execution of Broker 1's order (Trade event)

Although Broker 1 cancelled the route that was sent to Broker 2, the customer order remained open in Broker 1's books and records, and the order was further routed to Broker 3. Therefore, Broker 1 is not required to report the cancellation of the route that was sent to Broker 2. This guidance would also apply if Broker 1 routed the order to an exchange as opposed to another broker-dealer. Since the order in Broker 2's books and records is fully cancelled, Broker 2 is required to report the cancellation of the order to CAT.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order** event* type: MENO orderKeyDate: 20180417T000000	

#	Step	Reported Event	Comments
		orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234456 manualFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.534456 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: XYZO555 session: side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
4	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA	

| #	Step	Reported Event	Comments
		orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T143035.634456 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Broker 1 cancels the route to Broker 2	*NA*	Since the customer order is still open in Broker 1's books and records, Broker 1 is not required to report the cancellation of the route to Broker 2.
6	Broker 2 acknowledges the cancellation from Broker 1 and cancels the order.	*Broker 2 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T143036.334456 manualFlag: false cancelQty: 1000 leavesQty: 0 initiator: C	
7	Broker 1 routes the order to Broker 3	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143036.534456	

#	Step	Reported Event	Comments
		manualFlag: false senderIMID: FRMA destination: FRMC destinationType: F routedOrderID: XYZO560 session: side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
8	Broker 3 accepts the order from Broker 1	*Broker 3 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O6789 symbol: XYZ eventTimestamp: 20180417T143036.634456 manualFlag: false receiverIMID: FRMC senderIMID: FRMA senderType: F routedOrderID: XYZO560 affiliateFlag: false deptType: TA side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	
9	Broker 3 executes the order	*Broker 3 reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ124 symbol: XYZ	The *buyDetails* reflect the details of customer order O6789. The *sellDetails* capture the FDID of the firm proprietary account from which the customer order was filled.

#	Step	Reported Event	Comments
		eventTimestamp: 20180417T143037.234456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 9.99 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: O6789 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	

2.6.6. Firm Initiated Cancellation of a Customer Order

This scenario illustrates the CAT reporting requirements when an Industry Member cancels an order received from another Industry Member. In this scenario, Industry Member Broker 1 routes an order to Industry Member Broker 2. Broker 2 later cancels the order that it received from Broker 1 due to market conditions.
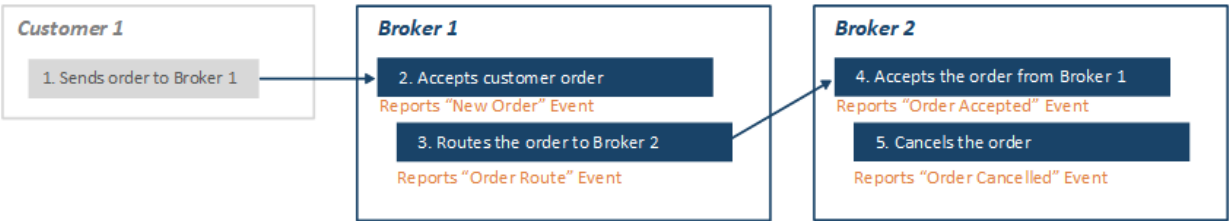
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the customer order to Broker 2 (Order Route event)

Industry Member Broker 2 is required to report:

- · The receipt of the order from Broker 1 (Order Accepted event)
- · The cancellation of Broker 1's order (Order Cancelled event)

Since the cancellation was initiated by Broker 2, Broker 1 is not required to report an Order Cancelled event to CAT.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234456 manualFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.534456 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: XYZO555 session: side: B price: 9.99 quantity: 1000 orderType: LMT	

#	Step	Reported Event	Comments
		timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
4	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T143036.234456 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Broker 2 cancels the customer order	*Broker 2 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T143038.234456 manualFlag: false cancelQty: 1000 leavesQty: 0 initiator: F	

2.6.7. Customer Cancels an Order that has Already Been Executed

This scenario illustrates the CAT reporting requirements when an Industry Member cancels an order that has already been executed. In this scenario, Industry Member Broker 1 receives a customer order, and routes the order to Broker 2 for execution. The customer cancels the order, but the order was executed several milliseconds before the cancellation was initiated by the customer.

Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The route of the customer order to Broker 2 (Order Route event)

Industry Member Broker 2 is required to report:

- The receipt of the order from Broker 1 (Order Accepted event)
- The execution of Broker 1's order (Trade event)

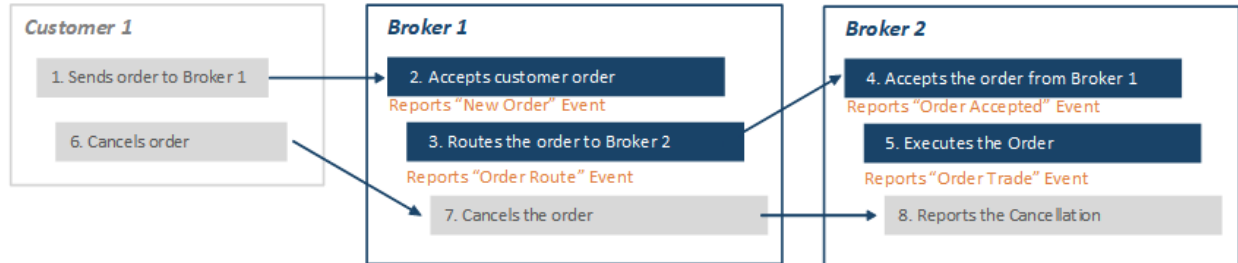Although the customer cancellation instruction was received after the execution of the order, Broker 1 and Broker 2 will be required to report an Order Cancelled event in Phase 2c. In accordance with CAT FAQ P14, if the cancellation of an order is received after it has been executed, the Order Cancelled event will not be rejected by CAT. Refer to CAT FAQ B42 for additional information.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234456 manualFlag: false deptType: A side: B price: 9.99 quantity: 1000	

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.534456 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: XYZO555 session: side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
4	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T143035.634456 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F	

#	Step	Reported Event	Comments
		routedOrderID: XYZO555 affiliateFlag: false deptType: TA side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Broker 2 executes the order	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ124 symbol: XYZ eventTimestamp: 20180417T143037.234456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 9.99 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: O34567 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	The *buyDetails* reflect the details of customer order O34567. The *sellDetails* capture the FDID of the firm proprietary account from which the customer order was filled.
6	Customer instructs Broker 1 to cancel the order several milliseconds after the order has been executed	*NA*	In Phase 2c, Broker 1 will be required to report an Order Cancelled event to CAT.
7	Broker 2 receives the cancellation instruction from Broker 1	*NA*	In Phase 2c, Broker 2 will be required to report an Order Cancelled event to CAT.

2.6.8. Unsolicited Cancellation of a Customer Order by an Exchange

This scenario illustrates the CAT reporting requirements when an Industry Member routes a customer order to an exchange, and the exchange cancels the order without receiving an explicit cancel request. In this scenario, Industry Member Broker 1 receives a customer order, and routes the order to an exchange for execution. The exchange accepts the order, then cancels the order without receiving an explicit cancel request. Note that there is a distinction from implicit cancels, such as IOC orders or DFD messages. In these cases, Industry Members are not required to report a cancellation because it is implied by the circumstances.

The reporting requirements in this scenario depend on the actions taken by Broker 1 upon receipt of the unsolicited cancellation from the exchange. Broker 1 is not required to report the unsolicited cancellation by the exchange. However, Broker 1 is required to report any action that it takes on the order as a result of the unsolicited cancellation, including a cancellation of the order on its own books and records, as outlined in Option 1.

If the order remains open on Broker 1's books and records after receipt of the unsolicited cancellation, Broker 1 must report any subsequent action on the order, such as a route to another venue, as outlined in Option 2.

Option 1

Upon cancellation by the exchange, Broker 1 cancels the order on its books and records.
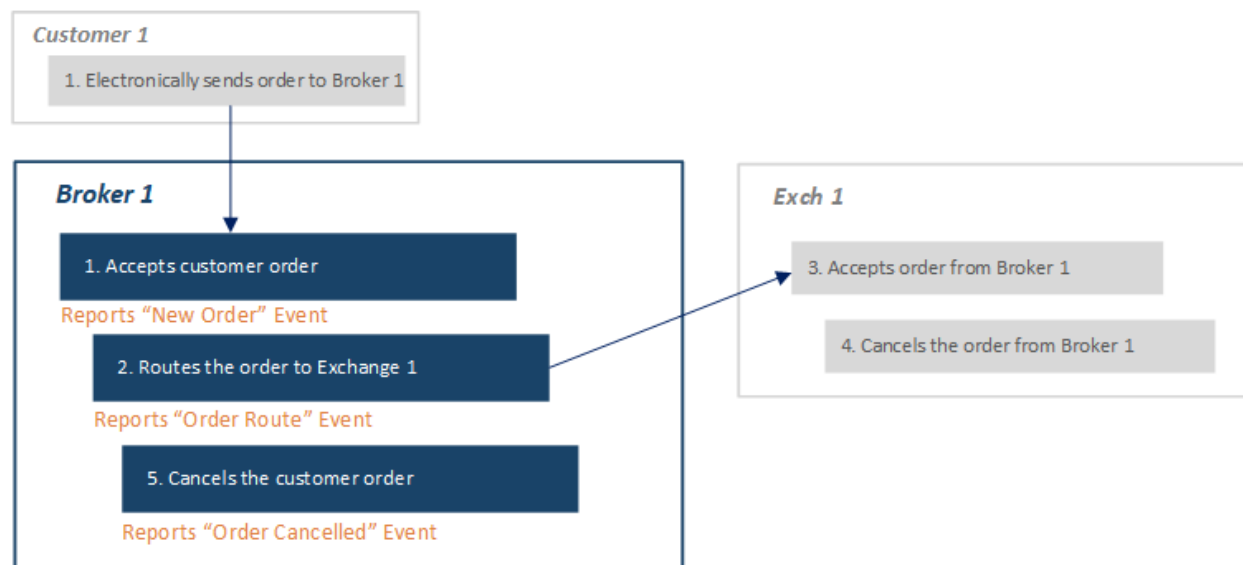
Industry Member Broker 1 is required to report:

- ·   The receipt of the customer order (New Order event)
- ·   The route of the customer order to the exchange (Order Route event)
- ·   The cancellation of the customer order (Order Cancelled event)

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234456 manualFlag: false deptType: T side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to the exchange	*Broker 1 reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.534456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: SESS-1 side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false	

#	Step	Reported Event	Comments
		isoInd: NA handlingInstructions:	
4	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
5	Exch 1 cancels the order	*Exch 1 reports a Participant **Order Cancelled event***	
6	Broker 1 cancels the customer order	*Broker 1 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143036.534456 manualFlag: false cancelQty: 1000 leavesQty: 0 initiator: F	Since Broker 1 made the determination to cancel the customer order upon receipt of the cancellation from the exchange, the *initiator* field should be populated with a value of "F".

Option 2:

Upon cancellation by the exchange, Broker 1 routes the order to another venue.
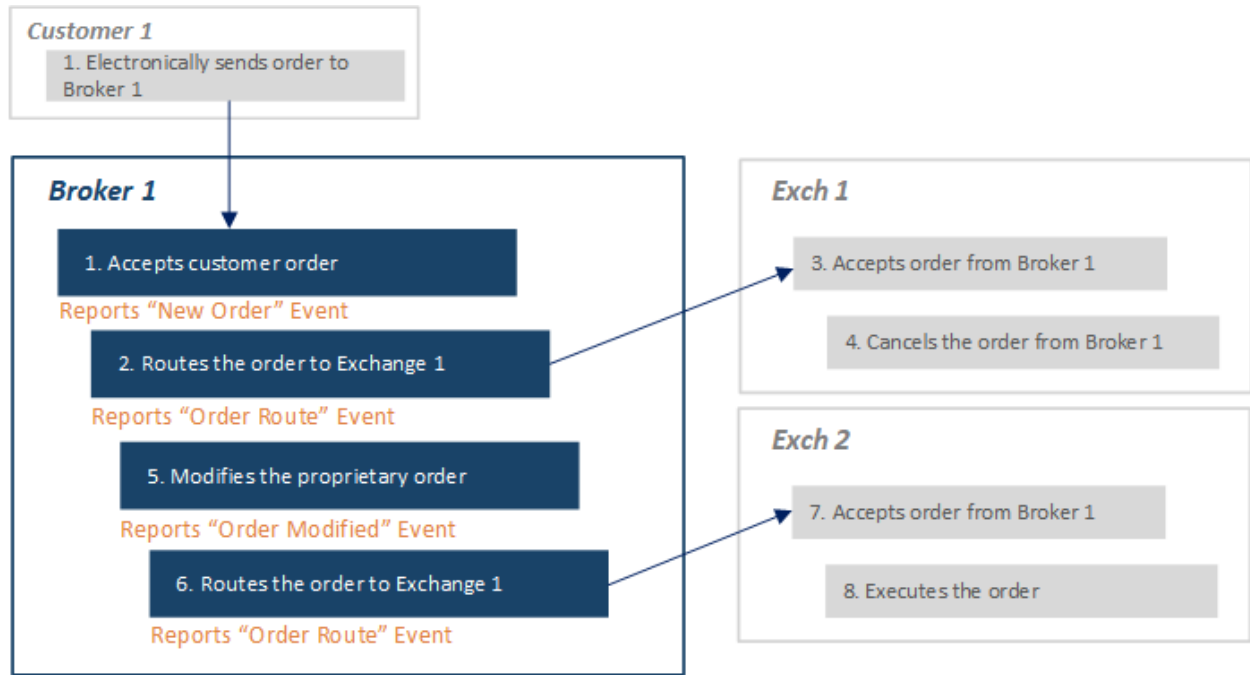

Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the order to Exchange 1 (Order Route event)
- · The route of the order to Exchange 2 (Order Route event)

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234456 manualFlag: false deptType: T side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to Exchange 1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.534456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: SESS-1 side: B price: 9.99	

#	Step	Reported Event	Comments
		quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
4	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
5	Exch 1 cancels the order	*Exch 1 reports a Participant **Order Cancelled event***	
6	Broker 1 routes the order to Exchange 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143036.534456 manualFlag: false senderIMID: FRMA destination: EXCH2 destinationType: E routedOrderID: XYZO560 session: SESS-5 side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
7	Exch 2 accepts the order from Broker 1	*Exch 2 reports a Participant **Order Accepted event***	
8	Exch 2 executes the order	*Exch 2 reports a Participant **Trade event***	

2.7. ATS Reporting Scenarios

This section illustrates the CAT reporting requirements for ATSs. Refer to Section 3.1 of the CAT Reporting Technical Specifications for Industry Members and Section H of the CAT FAQs regarding ATSs for additional information.

2.7.1. ATS Cross with One Order on Each Side

This scenario illustrates the CAT reporting requirements when a firm's ATS receives two Industry Member subscriber orders and crosses them.

Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the order to the ATS (Order Route event)

Industry Member Broker 2 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the order to the ATS (Order Route event)

Industry Member ATS A is required to report:

- · The receipt of the order from Broker 1 (Order Accepted event)
- · The receipt of the order from Broker 2 (Order Accepted event)
- · The Cross of Broker 1's order with Broker 2's order (Trade event)

#	Step	Reported Event	Comments
1	Customer sends a BUY order to Broker 1.	*NA*	
2	Broker 1 receives the BUY order from the customer	*Broker 1 (IMID=FRMA) reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ	

#	Step	Reported Event	Comments
		eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: A side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INC123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the BUY order to ATS A	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143032.123456 manualFlag: false senderIMID: FRMA destination: ATSA destinationType: F routedOrderID: ABCDXYZ555 side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
4	ATS A accepts the buy order routed from Broker 1	*ATS A (IMID = ATSA) reports an **Order Accepted event*** type: MEOA orderKeyDate: 20170801T000000 orderID: O88855 symbol: XYZ	

#	Step	Reported Event	Comments
		eventTimestamp: 20170801T143032.523456 manualFlag: false receiverIMID: ATSA senderIMID: FRMA senderType: F routedOrderID: ABCDXYZ555 affiliateFlag: false deptType: ATS side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA custDspIntrFlag: false seqNum: 1240 atsDisplayInd: N displayPrice: 0 workingPrice: 10.01 displayQty: 0 atsOrderType: P2 nbbPrice: 10.00 nboPrice: 10.03 nbboSource: S nbboTimestamp: 20170801T143032.523456	
5	Customer sends a SELL order to Broker 2	*NA*	
6	Broker 2 receives the SELL order from the customer	*Broker 2 (IMID=FRMB) reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O555 symbol: XYZ eventTimestamp: 20170801T143031.523456 manualFlag: false deptType: A side: SL price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	

#	Step	Reported Event	Comments
		custDspIntrFlag: false firmDesignatedID: INC555 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
7	Broker 2 routes the SELL order to ATS A	*Broker 2 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O555 symbol: XYZ eventTimestamp: 20170801T143032.123456 manualFlag: false senderIMID: FRMB destination: ATSA destinationType: F routedOrderID: ABCDXYZ556 side: SL price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
8	ATS A accepts the SELL order routed from Broker 2	*ATS A (IMID = ATSA) reports an **Order Accepted event*** type: MEOA orderKeyDate: 20170801T000000 orderID: O88856 symbol: XYZ eventTimestamp: 20170801T143032.523456 manualFlag: false receiverIMID: ATSA senderIMID: FRMB senderType: F routedOrderID: ABCDXYZ556 affiliateFlag: false deptType: ATS side: SL price: 10.01	

#	Step	Reported Event	Comments
		quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA custDspIntrFlag: false seqNum: 1260 atsDisplayInd: N displayPrice: 0 workingPrice: 10.01 displayQty: 0 atsOrderType: P2 nbbPrice: 10.00 nboPrice: 10.03 nbboSource: S nbboTimestamp: 20170801T143032.523456	
9	ATS A performs the cross, and the orders are executed.	*ATS A reports an* **Trade event** *with O88855 and O88856 on the sides* type: MEOT tradeKeyDate: 20170801T000000 tradeID: TXYZ100 symbol: XYZ eventTimestamp: 20170801T143033.523456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 300 price: 10.01 capacity: A tapeTradeID: BRSEQ8000 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20170801T000000 orderID: O88855 side: B sellDetails: orderKeyDate: 20170801T000000 orderID: O88856 side: SL seqNum: 1271 nbbPrice: 10.00 nboPrice: 10.02	The MEOT reported by ATSA must link to the related media trade report through the *tapeTradeID* field. ATSA is **not** required to link to any non-media trade reports.

#	Step	Reported Event	Comments
		nbboSource: S nbboTimestamp: 20170801T143033.523456	

2.7.2. ATS Cross with Multiple Orders on One Side

This scenario illustrates the CAT reporting requirements when an ATS matches as agent the orders of multiple customers on one side with the order of one customer on the other side. If the matches occur in a single execution or a "single event" (e.g., with the press of a button or pursuant to an automated execution algorithm), and the transaction is reported to the tape as a single transaction (e.g., a single cross), the ATS must report an MEOT event, followed by subsequent MEOTS events.

Sequential executions, even those occurring very close in time, would not be considered a single event and must be reported as separate MEOTs.

This scenario illustrates reporting requirements when using an MEOTS event.

Industry Member Broker 1 is required to report:

· The receipt of Customer 4's order (New Order event)
· The route of the order to the ATS (Order Route event)

Industry Member ATS A is required to report:

· The receipt of Customer 1's order (New Order event)
· The receipt of Customer 2's order (New Order event)
· The receipt of Customer 3's order (New Order event)
· The receipt of Broker 1's order (Order Accepted event)
· Matching of Broker 1's order with Customer 1's Order, Customer 2's Order and Customer 3's Order, and execution (Trade event)

- · Side Details of Customer 1's Order (Trade Supplement Event)
- · Side Details of Customer 2's Order (Trade Supplement Event)
- · Side Details of Customer 3's Order (Trade Supplement Event)

#	Step	Reported Event	Comments
1	Customer 1 sends a Buy order to ATS A	*NA*	
2	ATS A accepts the customer order	*ATS A reports a **New Order event*** type: MENO orderKeyDate: 20180416T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180416T153035.234456 manualFlag: false deptType: ATS side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N seqNum: 1201 atsDisplayInd: N displayPrice: 0 workingPrice: 10.00 displayQty: 0 atsOrderType: P1 nbbPrice: 9.99 nboPrice: 10.03 nbboSource: S nbboTimestamp: 20180416T153035.234455	
3	Customer 2 sends a Buy order to ATS A	*NA*	
4	ATS A accepts the customer order	*ATS A reports a **New Order event*** type: MENO orderKeyDate: 20180416T000000 orderID: O123999 symbol: XYZ	

#	Step	Reported Event	Comments
		eventTimestamp: 20180416T153035.334456 manualFlag: false deptType: ATS side: B price: 10.00 quantity: 300 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS567 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N seqNum: 1235 atsDisplayInd: N displayPrice: 0 workingPrice: 10.00 displayQty: 0 atsOrderType: P1 nbbPrice: 10.00 nboPrice: 10.03 nbboSource: S nbboTimestamp: 20180416T153035.334454	
5	Customer 3 sends a Buy order to ATS A	*NA*	
6	ATS A accepts the customer order	*ATS A reports a **New Order event*** type: MENO orderKeyDate: 20180416T000000 orderID: O12500 symbol: XYZ eventTimestamp: 20180416T153035.334456 manualFlag: false deptType: ATS side: B price: 10.00 quantity: 400 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS789 accountHolderType: A affiliateFlag: false	

#	Step	Reported Event	Comments
		negotiatedTradeFlag: false representativeInd: N seqNum: 1236 atsDisplayInd: N displayPrice: 0 workingPrice: 10.00 displayQty: 0 atsOrderType: P1 nbbPrice: 10.00 nboPrice: 10.03 nbboSource: S nbboTimestamp: 20180416T153035.334454	
7	Customer 4 sends a Sell order to Broker 1	*NA*	
8	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180416T000000 orderID: O8000 symbol: XYZ eventTimestamp: 20180416T153036.334456 manualFlag: false deptType: T side: SL price: 10.00 quantity: 1200 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST-IN200 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false	
9	Broker 1 routes the order to ATS A	*Broker 1 (IMID = BRKA) reports an **Order Route event*** type: MEOR orderKeyDate: 20180416T000000 orderID: O8000 symbol: XYZ eventTimestamp: 20180416T153036.500456 manualFlag: false	

#	Step	Reported Event	Comments
		senderIMID: BRKA destination: ATSA destinationType: F routedOrderID: ATSAXYZ8000 side: SL price: 10.00 quantity: 1200 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG affiliateFlag: false isoInd: NA	
10	ATS A accepts the order routed from Broker 1	*ATS A (IMID = ATSA) reports an* ***Order Accepted event*** type: MEOA orderKeyDate: 20180416T000000 orderID: O88855 symbol: XYZ eventTimestamp: 20180416T153036.544456 manualFlag: false receiverIMID: ATSA senderIMID: BRKA senderType: F routedOrderID: ATSAXYZ8000 affiliateFlag: false deptType: ATS side: SL price: 10.00 quantity: 1200 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG isoInd: NA custDspIntrFlag: false seqNum: 1240 atsDisplayInd: N displayPrice: 0 workingPrice: 10.00 displayQty: 0 atsOrderType: P2 nbbPrice: 10.00 nboPrice: 10.03 nbboSource: S nbboTimestamp: 20180416T153035.444454	

#	Step	Reported Event	Comments
11	ATS A matches Broker 1's order with Customer 1's order, Customer 2's Order and Customer 3's Order, and executes.	*ATS A reports a **Trade event*** type: MEOT tradeKeyDate: 20180416T000000 tradeID: TXYZ100 symbol: XYZ eventTimestamp: 20180416T153037.494456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1200 price: 10.00 capacity: A tapeTradeID: BRSEQ9000 marketCenterID: DN sideDetailsInd: NA sellDetails: orderID: O88855 orderKeyDate: 20180416T000000 side: SL seqNum: 1241 nbbPrice: 10.00 nboPrice: 10.02 nbboSource: S nbboTimestamp: 20180416T153037.494450	Since there was only one order on the sell side, ATSA would only populate the *sellD details* in its MEOT. A separate MEOTS will be reported for every order related to the buy side of the trade.
12	ATS A reports a Trade Supplement event with the side details of Customer 1's order	*ATS A reports a **Trade Supplement event** with side details for orderID O12345* type: MEOTS tradeKeyDate: 20180416T000000 tradeID: TXYZ100 symbol: XYZ eventTimestamp: 20180416T153037.494456 buyDetails: orderID: O12345 orderKeyDate: 20180416T000000 side: B quantity: 500	

#	Step	Reported Event	Comments
13	ATS A reports a Trade Supplement event with the side details of Customer 2's order	*ATS A reports a **Trade Supplement event** with side details for orderID O123999* type: MEOTS tradeKeyDate: 20180416T000000 tradeID: TXYZ100 symbol: XYZ eventTimestamp: 20180416T153037.494456 buyDetails: orderID: O123999 orderKeyDate: 20180416T000000 side: B quantity: 300	
14	ATS A reports a Trade Supplement event with the side details of Customer 3's order	*ATS A reports a **Trade Supplement event** with side details for orderID O12500* type: MEOTS tradeKeyDate: 20180416T000000 tradeID: TXYZ100 eventTimestamp: 20180416T153037.494456 buyDetails: orderID: O12500 orderKeyDate: 20180416T000000 side: B quantity: 400	

2.7.3. ATS Cross with Multiple Orders on Each Side

This scenario illustrates the CAT reporting requirements when an ATS matches as agent the orders of multiple customers on one side with the orders of multiple customers on the other side. If the matches occur in a single execution or a "single event" (e.g., with the press of a button or pursuant to an automated execution algorithm), and the transaction is reported to the tape as a single transaction (e.g., a single cross), the ATS must report an MEOT event, followed by subsequent MEOTS events.

Sequential executions, even those occurring very close in time, would not be considered a single event and must be reported as a separate MEOT.

This scenario illustrates reporting requirements when using an MEOTS event.

Customer 1
1. Sends an order to ATS A

ATS A
2. Accepts the Order from Customer 1
Reports "New Order" Event
4. Accepts the Order from Customer 2
Reports "New Order" Event
6. Accepts the Order from Customer 3
Reports "New Order" Event
10. Accepts the order from Broker 1
Reports "Order Accepted" Event
14. Accepts the order from Broker 2
Reports "Order Accepted" Event
15. Matches the orders and executes
Reports a "Trade" Event
Reports a "Trade Supplement" Event for each buy side order
Reports a "Trade Supplement" Event for each sell side order

Broker 1
8. Accepts the order from Customer 4
Reports "New Order" Event
9. Routes the order to ATS A
Reports "Order Route" Event

Broker 2
12. Accepts the order from Customer 5
Reports "New Order" Event
13. Routes the order to ATS A
Reports "Order Route" Event

Customer 4
7. Sends an order to Broker 1

Customer 5
11. Sends an order to Broker 2

Customer 2
3. Sends an order to ATS A

Customer 3
5. Sends an order to ATS A

Industry Member Broker 1 is required to report:

- The receipt of Customer 4's order (New Order event)
- The route of the order to the ATS (Order Route events)

Industry Member Broker 2 is required to report:

- The receipt of Customer 5's order (New Order event)
- The route of the order to the ATS (Order Route events)

Industry Member ATS A is required to report:

- The receipt of Customer 1's order (New Order event)
- The receipt of Customer 2's order (New Order event)
- The receipt of Customer 3's order (New Order event)
- The receipt of Broker 1's order (Order Accepted event)
- The receipt of Broker 2's order (Order Accepted event)
- Matching of Broker 1's order and Broker 2's order with Customer 1's Order, Customer 2's Order and Customer 3's Order, and execution (Trade event)
- Side Details of Customer 1's Order (Trade Supplement Event)
- Side Details of Customer 2's Order (Trade Supplement Event)
- Side Details of Customer 3's Order (Trade Supplement Event)
- Side Details of Broker 1's Order (Trade Supplement Event)
- Side Details of Broker 2's Order (Trade Supplement Event)

#	Step	Reported Event	Comments
1	Customer 1 sends a Buy order to ATS A	*NA*	
2	ATS A accepts the customer order	*ATS A reports a **New Order event*** type: MENO orderKeyDate: 20180416T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180416T153035.234456 manualFlag: false deptType: ATS side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N seqNum: 1201 atsDisplayInd: N displayPrice: 0 workingPrice: 10.00 displayQty: 0 atsOrderType: P1 nbbPrice: 9.99 nboPrice: 10.03 nbboSource: S nbboTimestamp: 20180416T153035.234455	
3	Customer 2 sends a Buy order to ATS A	*NA*	
4	ATS A accepts the customer order	*ATS A reports a **New Order event*** type: MENO orderKeyDate: 20180416T000000 orderID: O123999 symbol: XYZ eventTimestamp: 20180416T153035.334456 manualFlag: false deptType: ATS side: B	

#	Step	Reported Event	Comments
		price: 10.00 quantity: 300 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS567 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N seqNum: 1235 atsDisplayInd: N displayPrice: 0 workingPrice: 10.00 displayQty: 0 atsOrderType: P1 nbbPrice: 10.00 nboPrice: 10.03 nbboSource: S nbboTimestamp: 20180416T153035.334454	
5	Customer 3 sends a Buy order to ATS A	*NA*	
6	ATS A accepts the customer order	*ATS A reports a **New Order event*** type: MENO orderKeyDate: 20180416T000000 orderID: O12500 symbol: XYZ eventTimestamp: 20180416T153035.334456 manualFlag: false deptType: ATS side: B price: 10.00 quantity: 400 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS789 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N seqNum: 1236 atsDisplayInd: N displayPrice: 0	

#	Step	Reported Event	Comments
		workingPrice: 10.00 displayQty: 0 atsOrderType: P1 nbbPrice: 10.00 nboPrice: 10.03 nbboSource: S nbboTimestamp: 20180416T153035.334454	
7	Customer 4 sends a Sell order to Broker 1	*NA*	
8	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180416T000000 orderID: O8000 symbol: XYZ eventTimestamp: 20180416T153036.334456 manualFlag: false deptType: T side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST-IN200 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false	
9	Broker 1 routes the order to ATS A	*Broker 1 (IMID = BRKA) reports an **Order Route event*** type: MEOR orderKeyDate: 20180416T000000 orderID: O8000 symbol: XYZ eventTimestamp: 20180416T153036.500456 manualFlag: false senderIMID: BRKA destination: ATSA destinationType: F routedOrderID: ATSAXYZ8000 side: SL	

#	Step	Reported Event	Comments
		price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG affiliateFlag: false isoInd: NA	
10	ATS A accepts the order routed from Broker 1	*ATS A (IMID = ATSA) reports an* ***Order Accepted event*** type: MEOA orderKeyDate: 20180416T000000 orderID: O88855 symbol: XYZ eventTimestamp: 20180416T153036.544456 manualFlag: false receiverIMID: ATSA senderIMID: BRKA senderType: F routedOrderID: ATSAXYZ8000 affiliateFlag: false deptType: ATS side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG isoInd: NA custDspIntrFlag: false seqNum: 1240 atsDisplayInd: N displayPrice: 0 workingPrice: 10.00 displayQty: 0 atsOrderType: P2 nbbPrice: 10.00 nboPrice: 10.03 nbboSource: S nbboTimestamp: 20180416T153035.444454	
11	Customer 5 sends a Sell order to Broker 2	*NA*	
12	Broker 2 accepts the customer order	*Broker 1 reports a* ***New Order event***	

#	Step	Reported Event	Comments
		type: MENO orderKeyDate: 20180416T000000 orderID: O8005 symbol: XYZ eventTimestamp: 20180416T153036.334456 manualFlag: false deptType: T side: SL price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST-IN300 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false	
13	Broker 2 routes the order to ATS A	*Broker 2 (IMID = BRKB) reports an* **Order Route event** type: MEOR orderKeyDate: 20180416T000000 orderID: O8005 symbol: XYZ eventTimestamp: 20180416T153036.500456 manualFlag: false senderIMID: BRKB destination: ATSA destinationType: F routedOrderID: ATSAXYZ8000 side: SL price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG affiliateFlag: false isoInd: NA	
14	ATS A accepts the order routed from Broker 2	*ATS A (IMID = ATSA) reports an* **Order Accepted event** type: MEOA orderKeyDate: 20180416T000000	

#	Step	Reported Event	Comments
		orderID: O88856 symbol: XYZ eventTimestamp: 20180416T153036.544456 manualFlag: false receiverIMID: ATSA senderIMID: BRKB senderType: F routedOrderID: ATSAXYZ8000 affiliateFlag: false deptType: ATS side: SL price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG isoInd: NA custDspIntrFlag: false seqNum: 1241 atsDisplayInd: N displayPrice: 0 workingPrice: 10.00 displayQty: 0 atsOrderType: P2 nbbPrice: 10.00 nboPrice: 10.03 nbboSource: S nbboTimestamp: 20180416T153035.444454	
15	ATS A matches Broker 1's order and Broker 2's order with Customer 1's order, Customer 2's Order and Customer 3's Order, and executes.	*ATS A reports a **Trade event*** type: MEOT tradeKeyDate: 20180416T00000 tradeID: TXYZ100 symbol: XYZ eventTimestamp: 20180416T153037.494456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1200 price: 10.00 capacity: A tapeTradeID: BRSEQ9000 marketCenterID: DN sideDetailsInd: NA seqNum: 1242	Since there was more than one order on both the buy side and the sell side, the side details for all related orders will be captured in separate MEOTS events.

#	Step	Reported Event	Comments
		nbbPrice: 10.00 nboPrice: 10.02 nbboSource: S~~IP~~ nbboTimestamp: 20180416T153037.494456	
16	ATS A reports a Trade Supplement event with the side details of Customer 1's order	*ATS A reports a **Trade Supplement event** with side details for orderID O12345* type: MEOTS tradeKeyDate: 20180416T000000 tradeID: TXYZ100 symbol: XYZ eventTimestamp: 20180416T153037.494456 buyDetails: orderID: O12345 orderKeyDate: 20180416T000000 side: B quantity: 500	
17	ATS A reports a Trade Supplement event with the side details of Customer 2's order	*ATS A reports a **Trade Supplement event** with side details for orderID O123999* type: MEOTS tradeKeyDate: 20180416T000000 tradeID: TXYZ100 symbol: XYZ eventTimestamp: 20180416T153037.494456 buyDetails: orderID: O123999 orderKeyDate: 20180416T153035.334456 side: B quantity: 300	
18	ATS A reports a Trade Supplement event with the side details of Customer 3's order	*ATS A reports a **Trade Supplement event** with side details for orderID O12500* type: MEOTS tradeKeyDate: 20180416T000000 tradeID: TXYZ100 symbol: XYZ	

| #	Step	Reported Event	Comments
		eventTimestamp: 20180416T153037.494456 buyDetails: orderID: O12500 orderKeyDate: 20180416T000000 side: B quantity: 400	
19	ATS A reports a Trade Supplement event with the side details of Broker 1's order	*ATS A reports a **Trade Supplement event** with side details for orderID O88855* type: MEOTS tradeKeyDate: 20180416T000000 tradeID: TXYZ100 symbol: XYZ eventTimestamp: 20180416T153037.494456 sellDetails: orderID: O88855 orderKeyDate: 20180416T000000 side: SL~~B~~ quantity: 1000	
20	ATS A reports a Trade Supplement event with the side details of Broker 2's order	*ATS A reports a **Trade Supplement event** with side details for orderID O88856* type: MEOTS tradeKeyDate: 20180416T000000 tradeID: TXYZ100 symbol: XYZ eventTimestamp: 20180416T153037.494456 sellDetails: orderID: O88856 orderKeyDate: 20180416T000000 side: SL~~B~~ quantity: 200	

2.7.4. Order Modification of a PEG Order

This scenario illustrates how an Order Adjusted Event is reported when either a display ATS or a non-display ATS reprices a peg order.

In accordance with CAT FAQ H1, each time an Industry Member reprices a peg order based on a market move (i.e., when there is a change in the national best bid or offer or the best bid or offer on a particular exchange, as applicable based on the terms of the order), the Industry Member must report a price modification of the peg order to the CAT pursuant to Section 6.3(d) of the CAT NMS Plan, as applied to Industry Members by Section 6.4(d)(i) of the CAT NMS Plan, if the price is modified.

If the Industry Member does not reprice a peg order when the market moves, the Industry Member does not need to report a modification of the peg order to the CAT since the order was not modified by either the customer or the Industry Member. For example, for both displayed and non-displayed alternative trading systems (ATSs), if an ATS's matching engine reprices a peg order when the market moves, the price modification must be reported to the CAT. If a matching engine does not reprice a peg order when the market moves, there is no requirement to report a price modification to the CAT.

In this scenario, Industry Member Broker 1 routes a customer midpoint PEG order to ATS A. ATS A gives the order a working price upon receipt. Then the NBBO changes while the order stays open on the book. The ATS reprices the order, which must be reported to CAT.
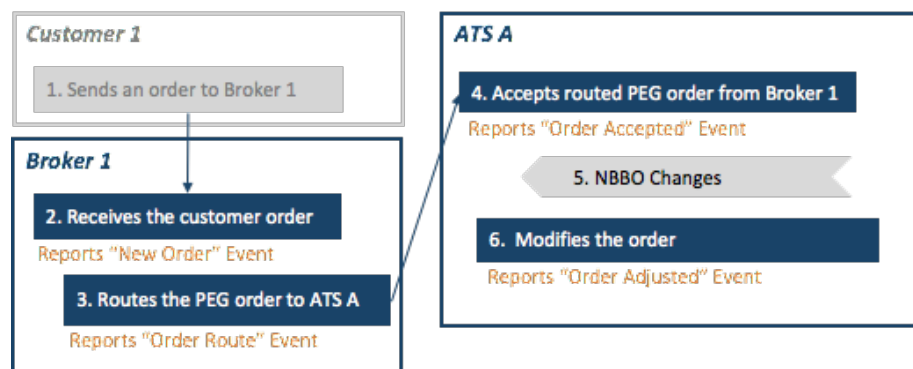
Industry Member Broker 1 is required to report:

- · The receipt of customer order (New Order event)
- · The route of the order to the ATS (Order Route event)

Industry Member ATS A is required to report:

- · The receipt of the PEG order from Broker 1 (Order Accepted event)
- · The modification of the price due to NBBO changes (Order Adjusted Event)

Since only a price change is being reported, ATS A is required to represent the current state of all price fields in its Order Adjusted event. The quantity fields are not required.

#	Step	Reported Event	Comments
1	Customer sends a PEG order to Broker 1	*NA*	

#	Step	Reported Event	Comments
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order Event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: A side: B price: 10.10 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG handlingInstructions: M custDspIntrFlag: false firmDesignatedID: C123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the PEG order to ATS A	*Broker 1 reports an **Order Route Event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.623456 manualFlag: false senderIMID: BRK1 destination: ATSA destinationType: F routedOrderID: S12O12345 side: Buy price: 10.10 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	In Phase 2c, Broker 1 will be required to populate a value of 'M' in the *handlingInstructions* field on its Order Route event.

#	Step	Reported Event	Comments
4	The ATS accepts the order from Broker 1	*ATS A reports an* **Order Accepted Event** type: MEOA orderKeyDate: 20170801T000000 orderID: O999 symbol: XYZ eventTimestamp: 20170801T143031.123456 manualFlag: false receiverIMID: ATSA senderIMID: BRK1 senderType: F routedOrderID: S12O12345 affiliateFlag: false deptType: ATS side: B price: 10.10 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA handlingInstructions: M custDspIntrFlag: false seqNum: 1008 atsDisplayInd: N displayPrice: 0 workingPrice: 10.07 displayQty: 0 atsOrderType: MPEG nbbPrice: 10.05 nbbQty: 500 nboPrice: 10.09 nboQty: 300 nbboSource: S nbboTimestamp: 20170801T143031.123456	Upon receipt of the order, the ATS assigns a working price based on the market condition. The ATS must capture the NBBO, the source of NBBO, as well as a timestamp indicating the time that the NBBO was captured.
5	The NBBO changes	*NA*	The NBBO changed to 10.05 X 10.08
6	The ATS reprices the working price of the order	*The ATS reports an* **Order Adjusted Event** type: MEOJ orderKeyDate: 20170801T000000 orderID: O1001 symbol: XYZ	The ATS must use the Order Adjusted event for price adjustments as the result of an action by its matching engine. In this example, the ATS assigns a new Order Key with *orderID* O1001 when the order is adjusted. The

| #	Step	Reported Event	Comments
		priorOrderKeyDate: 20170801T000000 priorOrderID: O999 eventTimestamp: 20170801T143031.623456 manualFlag: false initiator: F price: 10.10 seqNum: 1200 atsDisplayInd: N displayPrice: 0 workingPrice: 10.065 nbbPrice: 10.05 nboPrice: 10.08 nbboSource: S nbboTimestamp: 20170801T143031.603456	*orderKeyDate* must be populated with the date that the new Order Key was assigned. The Prior Order Key with *orderID* O999 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Adjusted event with the Order Accepted event. Since only a price change is being reported, ATSA is required to represent the current state of all price fields. The quantity fields are not required.

2.7.5. Receipt of PEG Order, Followed by Change in NBBO with No Modification on the Order

In accordance with CAT FAQ H1, each time an Industry Member reprices a peg order based on a market move (i.e., when there is a change in the national best bid or offer or the best bid or offer on a particular exchange, as applicable based on the terms of the order), the Industry Member must report a price modification of the peg order to the CAT pursuant to Section 6.3(d) of the CAT NMS Plan, as applied to Industry Members by Section 6.4(d)(i) of the CAT NMS Plan, if the price is modified.

If the Industry Member does not reprice a peg order when the market moves, the Industry Member does not need to report a modification of the peg order to the CAT since the order was not modified by either the customer or the Industry Member. For example, for both displayed and non-displayed alternative trading systems (ATSs), if an ATS's matching engine reprices a peg order when the market moves, the price modification must be reported to the CAT. If a matching engine does not reprice a peg order when the market moves, there is no requirement to report a price modification to the CAT.

In this scenario, an ATS receives a buy order with a primary peg instruction and a limit price of $10. The order is not displayable or routable and the ATS has no sell orders that are eligible to trade with the buy order. The NBB subsequently moves to 9.99 and the ATS receives no other sell orders that are eligible to trade with the buy order. The ATS takes no action on the open buy order when the NBB moves to 9.99, therefore there is no CAT reportable event.
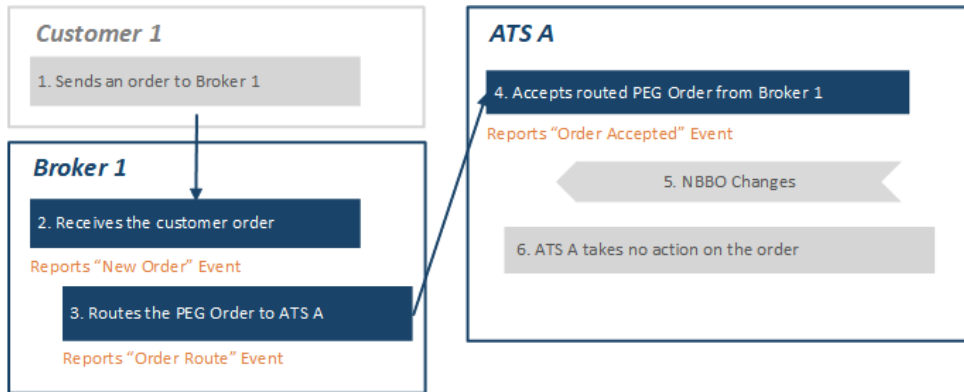
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The route of the order to the ATS (Order Route event)

Industry Member ATS A report:

- The receipt of the PEG order from Broker 1 (Order Accepted Event)

#	Step	Reported Event	Comments
1	Customer sends a PEG order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order Event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: A side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG handlingInstructions: R custDspIntrFlag: false firmDesignatedID: C123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	

#	Step	Reported Event	Comments
3	Broker 1 routes the PEG order to ATS A	*Broker 1 reports an* **Order Route Event** type: MEOR orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.623456 manualFlag: false senderIMID: BRK1 destination: ATSA destinationType: F routedOrderID: S12O12345 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	In Phase 2c, BRK1~~ATSA~~ will be required to populate a value of 'M' in the *handlingInstructions* field on its Order Route event.
4	The ATS accepts the routed order from Broker 1	*ATS A reports an* **Order Accepted Event** type: MEOA orderKeyDate: 20170801T000000 orderID: O999 symbol: XYZ eventTimestamp: 20170801T143031.123456 manualFlag: false receiverIMID: ATSA senderIMID: BRK1 senderType: F routedOrderID: S12O12345 affiliateFlag: false deptType: ATS side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA handlingInstructions: M	Upon receipt of the order, the ATS assigns a working price based on the market condition. The ATS must capture the NBBO, the source of NBBO, as well as a timestamp indicating the time that the NBBO was captured.

#	Step	Reported Event	Comments
		custDspIntrFlag: false seqNum: 1008 atsDisplayInd: N displayPrice: 0 workingPrice: 10.00 displayQty: 0 atsOrderType: PPEG nbbPrice: 9.98 nbbQty: 500 nboPrice: 10.02 nboQty: 300 nbboSource: S nbboTimestamp: 20170801T143031.123456	
5	The NBBO changes	NA	The NBBO changes to 9.99 x 10.03
6	The ATS does not re-price the order	NA	Since the ATS did not re-price the order, an MEOJ is not required.

2.7.6. Crossing of PEG Order after a Change in NBBO with No Modification on the Order

In accordance with CAT FAQ H1, each time an Industry Member reprices a peg order based on a market move (i.e., when there is a change in the national best bid or offer or the best bid or offer on a particular exchange, as applicable based on the terms of the order), the Industry Member must report a price modification of the peg order to the CAT pursuant to Section 6.3(d) of the CAT NMS Plan, as applied to Industry Members by Section 6.4(d)(i) of the CAT NMS Plan, if the price is modified.

If the Industry Member does not reprice a peg order when the market moves, the Industry Member does not need to report a modification of the peg order to the CAT since the order was not modified by either the customer or the Industry Member. For example, for both displayed and non-displayed alternative trading systems (ATSs), if an ATS's matching engine reprices a peg order when the market moves, the price modification must be reported to the CAT. If a matching engine does not reprice a peg order when the market moves, there is no requirement to report a price modification to the CAT.

In this scenario, An ATS receives a buy order with mid-point peg instruction when the NBBO is 9.85 x 10. The order is not displayable or routable and the ATS has no sell orders that are eligible to trade with the buy order. The NBBO subsequently moves to 9.90 x 10. The ATS then receives a market order to sell that is eligible to trade with the buy order and the two orders are crossed at 9.95. Because the ATS did not re-price the buy order prior to executing it, there is no CAT reportable event required to reflect a price modification of the buy order to 9.95.

Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the order to the ATS (Order Route event)

Industry Member Broker 2 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the order to the ATS (Order Route event)

Industry Member ATS A must report:

- · The receipt of the PEG order from Broker 1 (Order Accepted event)
- · The receipt of the Market order from Broker 2 (Order Accepted event)
- · The Cross of Broker 1's order with Broker 2's order (Trade event)

#	Step	Reported Event	Comments
1	Customer 1 sends a PEG order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order Event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: A side: B price: 10.10 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	

#	Step	Reported Event	Comments
		handlingInstructions: M custDspIntrFlag: false firmDesignatedID: C123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the PEG order to ATS A	*Broker 1 reports an **Order Route Event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143030.623456 manualFlag: false senderIMID: BRK1 destination: ATSA destinationType: F routedOrderID: S12O12345 side: B price: 10.10 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	In Phase 2c, BRK1~~ATSA~~ will be required to populate a value of 'M' in the *handlingInstructions* field on its Order Route event.
4	The ATS accepts the routed order from Broker 1	*ATS A reports an **Order Accepted Event*** type: MEOA orderKeyDate: 20170801T000000 orderID: O999 symbol: XYZ eventTimestamp: 20170801T143031.123456 manualFlag: false receiverIMID: ATSA senderIMID: BRK1 senderType: F routedOrderID: S12O12345 affiliateFlag: false deptType: ATS	Upon receipt of the order, the ATS assigns a working price based on the market condition. The ATS must capture the NBBO, the source of NBBO, as well as a timestamp indicating the time that the NBBO was captured.

#	Step	Reported Event	Comments
		side: B price: 10.10 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA handlingInstructions: M custDspIntrFlag: false seqNum: 1008 atsDisplayInd: N displayPrice: 0 workingPrice: 9.95 displayQty: 0 atsOrderType: MPEG nbbPrice: 9.8590 nbbQty: 500 nboPrice: 10.00 nboQty: 300 nbboSource: S nbboTimestamp: 20170801T143031.123456	
5	The NBBO changes	*NA*	The NBBO changed to 9.90 X 10.00
6	The ATS does not re-price the order	*NA*	Since the ATS did not re-price the order, an MEOJ is not required.
7	Customer 2 sends a PEG order to Broker 2	*NA*	
8	Broker 2 accepts the customer order	*Broker 2 reports a **New Order Event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20170801T143032.123456 manualFlag: false deptType: A side: SLB quantity: 500 orderType: MKT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C124 accountHolderType: A	

| #	Step	Reported Event	Comments
		affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
9	Broker 2 routes the MKT order to ATS A	*Broker 2 reports an **Order Route Event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20170801T143032.623456 manualFlag: false senderIMID: BRK2 destination: ATSA destinationType: F routedOrderID: S12O12346 side: SLB quantity: 500 orderType: MKT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
10	The ATS accepts the routed order from Broker 2	*ATS A reports an **Order Accepted Event*** type: MEOA orderKeyDate: 20170801T000000 orderID: O9910 symbol: XYZ eventTimestamp: 20170801T143033.123456 manualFlag: false receiverIMID: ATSA senderIMID: BRK2 senderType: F routedOrderID: S12O12346 affiliateFlag: false deptType: ATS side: SLB quantity: 500 orderType: MKT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA	

#	Step	Reported Event	Comments
		custDspIntrFlag: false seqNum: 1058 atsDisplayInd: N displayPrice: 0 workingPrice: 0 displayQty: 0 atsOrderType: MKT nbbPrice: 9.90 nbbQty: 500 nboPrice: 10.00 nboQty: 300 nbboSource: S nbboTimestamp: 20170801T143033.123456	
11	ATS A matched and crossed the Buy and Sell orders	*ATS A reports a **Trade event*** type: MEOT tradeID: TXYZ124 tradeKeyDate: 20170801T000000 symbol: XYZ eventTimestamp: 20170801T143033.523456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 500 price: 9.95 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20170801T000000 orderID: O999 side: B sellDetails: orderKeyDate: 20170801T000000 orderID: O9910 side: SL	In this Trade Event, the Buy side details reflect the customer order O999, and the Sell side details reflect the routed order O9910

2.7.7. Display Modifications of a Display ATS

Display modifications can be reported to CAT using the Order Adjusted event. This scenario illustrates the CAT reporting requirements when an order is partially executed on an ATS, and as a result the display size of the order changes. In this scenario, an order is routed to an ATS for execution.

This example illustrates the display modification reporting, and does not reflect subsequent order handling.
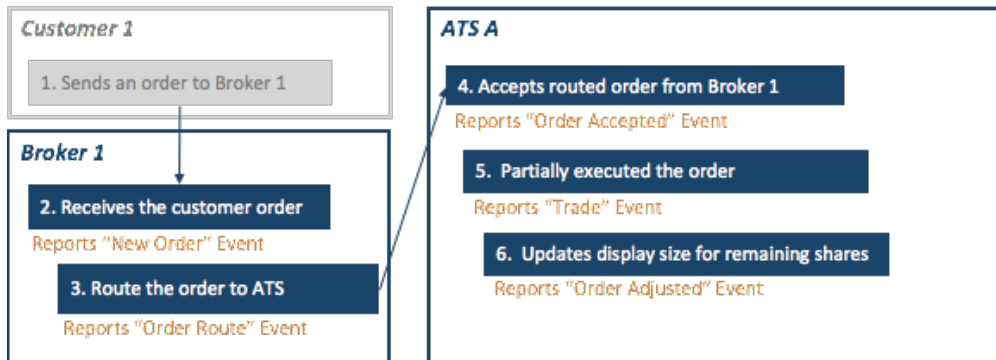
Industry Member Broker 1 is required to report:

· Receipt of the customer order (New Order event)
· The route of the order to ATS A (Order Route event)

Industry Member ATS A is required to report:

· The receipt of the order from Broker 1 (Order Accepted event)
· The partial execution of the order (Trade event)
· The update to the display size post execution (Order Adjusted event)

Since only a quantity change is being reported, ATSA is required to represent the current state of all quantity fields in its Order Adjusted event. The price fields are not required.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1 with a display quantity of 1000	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O34567 symbol: XYZ	The order was received from the customer with a display quantity instruction, which is represented in the h*andlingInstructions* field with a Name/Value pair of 'DISQ=1000'.

#	Step	Reported Event	Comments
		eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: A side: B price: 10.00 quantity: 10000 minQty: 100 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG handlingInstructions: RSV|DISQ=1000 custDspIntrFlag: true firmDesignatedID: CUS999 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to ATS A	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20170801T143030.323456 manualFlag: false senderIMID: BRKR1 destination: ATSA destinationType: F routedOrderID: RTO34567 side: B price: 10.00 quantity: 10000 minQty: 100 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	In Phase 2c, Broker 1 will be required to populate a value of 'RSV' and a Name/Value Pair of "DISQ=1000" in the *handlingInstructions* field on its Order Route event.
4	ATS accepts the order from Broker 1	*ATS A reports an **Order Accepted event***	

#	Step	Reported Event	Comments
		type: MEOA orderKeyDate: 20170801T000000 orderID: O27272 symbol: XYZ eventTimestamp: 20170801T143030.343456 manualFlag: false receiverIMID: ATSA senderIMID: BRKR1 senderType: F routedOrderID: RTO34567 affiliateFlag: false deptType: ATS side: B price: 10.00 quantity: 10000 minQty: 100 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA handlingInstructions: RSV|DISQ=1000 custDspIntrFlag: false seqNum: 15019 atsDisplayInd: Y displayPrice: 10.00 workingPrice: 10.00 displayQty: 1000 atsOrderType: RSVA nbbPrice: 9.96 nboPrice: 10.02 nbboSource: S nbboTimestamp: 20170801T143030.343456	
5	ATS partially executes the order	*ATS A reports a* **Trade event** type: MEOT tradeKeyDate: 20170801T000000 tradeID: TO555 symbol: XYZ eventTimestamp: 20170801T143030.543456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 800	

#	Step	Reported Event	Comments

		price: 10.00
		capacity: A
		tapeTradeID: TTI23456
		marketCenterID: DN
		sideDetailsInd: NA
		buyDetails:
		    orderKeyDate:
		    20170801T000000
		    orderID: O27272
		    side: B
		sellDetails:
		    orderKeyDate:
		    20170801T000000
		    orderID: O54321
		    side: SL
		seqNum: 15201
		nbbPrice: 10.00
		nboPrice: 10.02
		nbboSource: S
		nbboTimestamp:
		20170801T143030.543455	

6	ATS updates the order with new display size	*ATS A reports an **Order Adjusted event*** type: MEOJ orderKeyDate: 20170801T000000 orderID: O27273 symbol: XYZ priorOrderKeyDate: 20170801T000000 priorOrderID: O27272 eventTimestamp: 20170801T143030.543856 manualFlag: false initiator: F quantity: 10000 minQty: 100 leavesQty: 9200 seqNum: 15285 atsDisplayInd: Y displayQuantity: 200 nbbPrice: 10.00 nboPrice: 10.02 nbboSource: S nbboTimestamp: 20170801T143030.543855	The ATS must use the Order Adjusted event for price adjustments as the result of an action by its matching engine. In this example, the ATS assigns a new Order Key with *orderID* O27273 when the order is adjusted. The *orderKeyDate* must be populated with the date that the new Order Key was assigned. The Prior Order Key with *orderID* O27272 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Adjusted event with the Order Accepted event. Since only a quantity change is being reported, ATSA is required to represent the current state of all quantity fields. The price fields are not required.

2.8. OTC Reporting Scenarios

This section illustrates the CAT reporting requirements for OTC securities. Refer to Section J of the CAT FAQs regarding OTC Securities for additional information.

2.8.1. Trade Negotiated through an Inter-Dealer Quotation System

This scenario illustrates the CAT reporting requirements when a Market Maker executes an order as the result of a negotiation with another Industry Member through an inter-dealer quotation system ("IDQS").

In this scenario, Market Maker 1 is quoting symbol XYZ on an IDQS to buy 1000 shares at 1.15. IDQS participant and Industry Member Broker 2 sends a message through the inter-dealer quotation system to Market Maker 1 and begins a negotiation. Broker 2 ultimately accepts a counter offer from Market Maker 1 and executes the trade (3,000 shares at 1.14), and reports the trade to the ORF.

Industry Member Market Maker 1 is required to report the following in phase 2a:

- A proprietary new buy order for 3,000 shares (New Order event)
- An execution linking to the ORF trade report (Trade event)

Industry Member Broker 2 must report the following in phase 2a:

- A new proprietary sell order for 3,000 shares (New Order event)
- An execution linking to the ORF trade report (Trade event)

The Industry Member IDQS will be required to report the following in phase 2a:

- The receipt of Market Maker 1's quote (Quote Received event)

All of the New Order and Trade events occurring as a result of the negotiation must have the *negotiatedTradeFlag* and *sideDetailsInd* fields present and marked properly. Both Trade events reported by Marker Maker 1 and Broker 2 must link to the same ORF report.

In phase 2c, Market Maker 1 will be required to report an MENQ reflecting the quote that was sent to the IDQS, and will be required to populate a quoteID in its MEOT linking to the quoteID in its MENQ event. In phase 2c, Broker 2 will be required to populate a quoteID in its MEOT linking to the MEQR reported by the IDQS.

The negotiation between Market Maker 1 and Broker 2 is not reportable to CAT.

| #	Step	Reported Event	Comments
1	Market Maker 1 sends a quote to the IDQS	*NA*	In phase 2c, Market Marker 1 will be required to report a New Quote event. The *quoteID* for this MENQ would be Q1234 in phase 2c.
2	The IDQS receives the quote from Market Maker 1	*IDQS (IMID = IDQS) reports a* **Quote Received event** type: MEQR quoteKeyDate: 20180501T000000 quoteID: Q6789 symbol: XYZ receivedQuoteID: eventTimestamp: 20180501T153035.234456 receiverIMID: IDQS senderIMID: MMA onlyOneQuoteFlag: false bidPrice: 1.15 bidQty: 1000 mpStatusCode: open unsolicitedInd: B quoteWantedInd:	In Phase 2c, the IDQS will be required to link the Quote Received event to the New Quote event reported by Market Maker 1 through the *receivedQuoteID* field.
3	The trade is negotiated between Market Maker 1 and Broker 2	*NA*	Negotiations are not reportable to CAT.
4	Market Maker 1 generates a new proprietary order	*Market Maker 1 (IMID = MMA) reports a* **New Order event** type: MENO orderKeyDate: 20180501T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false deptType: T side: B price: 1.14 quantity: 3000	

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP1 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: true representativeInd: N	
5	Market Maker 1 reports the execution	*Market Maker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp: 20180501T153039 manualFlag: true cancelFlag: false cancelTimestamp: quoteKeyDate: quoteID: quantity: 3000 price: 1.14 capacity: P tapeTradeID: ORF1234 marketCenterID: ON sideDetailsInd: BUY buyDetails: orderKeyDate: 20180501T000000 orderID: O12345 side: B	The *sideDetailsInd* must be marked as BUY. Side details are not required for the contra-side (sell side) In phase 2c, MMA will be required to populate a *quoteID* of Q1234 linking to its New Quote event.
6	Broker 2 generates a new proprietary order	*Broker 2 (IMID = BRKB) reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false deptType: T side: SL	

#	Step	Reported Event	Comments
		price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP2 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: true representativeInd: N	
7	Broker 2 reports the execution	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR124 symbol: XYZ eventTimestamp: 20180501T153039 manualFlag: true cancelFlag: false cancelTimestamp: quoteKeyDate: quoteID: quantity: 3000 price: 1.14 capacity: P tapeTradeID: ORF1234 marketCenterID: ON sideDetailsInd: SELL sellDetails: orderKeyDate: 20180501T000000 orderID: O12346 side: SL	The sideDetailsInd must be marked as SELL. Side details are not required for the contra-side (buy side). In phase 2c, BRK2 will be required to populate a *quoteID* of Q6789 linking to the Quote Received event reported by the IDQS.

2.8.2. Customer Order Executed as the result of a Negotiation through an Inter-Dealer Quotation System

This scenario illustrates the CAT reporting requirements when a Market Maker receives a customer order then submits an unsolicited displayed (bid) quote to an inter-dealer quotation system ("IDQS"), and the order is executed as the result of a negotiation.
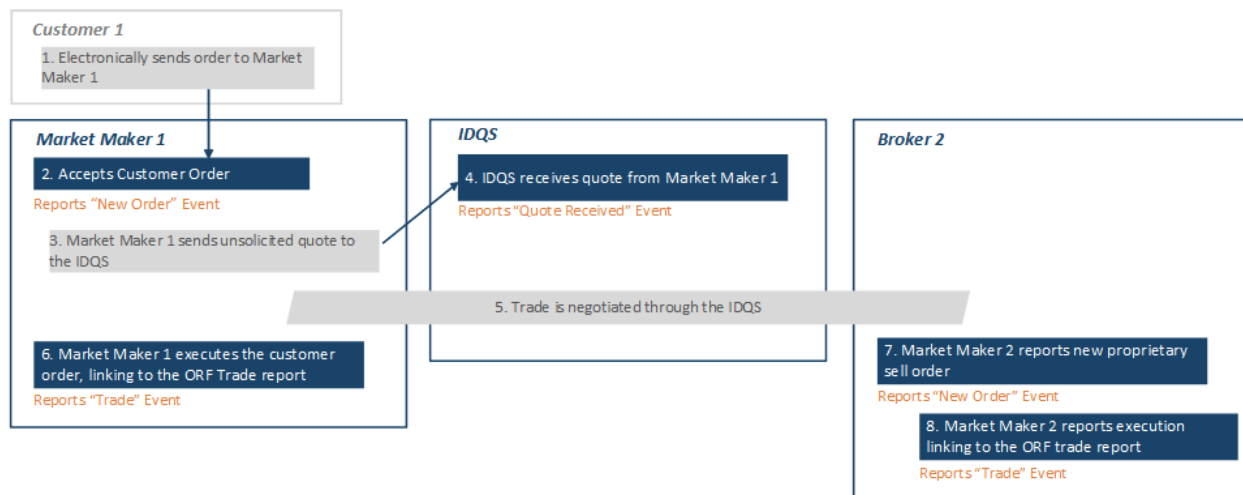
Industry Member Market Maker 1 is required to report the following in phase 2a:

· The receipt of the customer order (New Order event)
· The execution of the customer order linking to the ORF trade report (Trade event)

Industry Member Broker 2 must report the following to CAT in phase 2a:

· A new proprietary sell order (New Order event)
· An execution linking to the ORF trade report (Trade event)

The Industry Member IDQS will be required to report the following to CAT for phase 2a:

· The receipt of Market Maker 1's quote (Quote Received event)

All of the New Order and Trade events occurring as a result of the negotiation must have the *negotiatedTradeFlag* and *sideDetailsInd* fields present and marked properly. Both Trade events reported by Marker Maker 1 and Broker 2 must link to the same ORF report.

In phase 2c, Market Maker 1 will be required to report an MENQ reflecting the quote that was sent to the IDQS, and will be required to populate a quoteID in its MEOT linking to the quoteID in its MENQ event. In phase 2c, Broker 2 will be required to populate a quoteID in its MEOT linking to the MEQR reported by the IDQS.

#	Step	Reported Event	Comments
1	Customer 1 sends an order to Market Maker 1	*NA*	
2	Market Maker 1 receives the order from Customer 1	*Market Maker 1 (IMID = MMA) reports a* **New Order event** type: MENO orderKeyDate: 20180501T000000	

| #	Step	Reported Event	Comments
		orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153034.234456 manualFlag: false deptType: T side: B price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Market Maker 1 sends a quote to the IDQS	*NA*	Market Maker 1 will be required to report a New Quote event in Phase 2c. The *quoteID* for this MENQ would be Q1234 in phase 2c.
4	The IDQS receives a quote from Market Maker 1	*IDQS (IMID = IDQS) reports a* **Quote Received event** type: MEQR quoteKeyDate: 20180501T000000 quoteID: Q6789 symbol: XYZ receivedQuoteID: eventTimestamp: 20180501T153035.534456 receiverIMID: IDQS senderIMID: MMA onlyOneQuoteFlag: false bidPrice: 1.14 bidQty: 3000 mpStatusCode: open unsolicitedInd: B quoteWantedInd:	In Phase 2c, the IDQS will be required to link the Quote Received event to the New Quote event reported by Market Maker 1 through the *receivedQuoteID* field.
5	A trade is negotiated between Market Maker 1 and Broker 2 through the IDQS	*NA*	
6	Market Maker 1 reports	*Market Maker 1 reports a* **Trade event**	The *sideDetailsInd* must be marked as BUY. Side details are not required

#	Step	Reported Event	Comments
	the execution	type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp: 20180501T153039 manualFlag: true cancelFlag: false cancelTimestamp: quoteKeyDate: quoteID: quantity: 3000 price: 1.14 capacity: A tapeTradeID: ORF1234 marketCenterID: ON sideDetailsInd: BUY buyDetails: orderKeyDate: 20180501T000000 orderID: O12345 side: B	for the contra-side (sell side). In phase 2c, MMA will be required to populate a *quoteID* of Q1234 linking to its New Quote Event.
6	Broker 2 generates a new proprietary order	*Broker 2 (IMID = BRKB) reports a* **New Order event** type: MENO orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false deptType: T side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP2 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: true representativeInd: N	

#	Step	Reported Event	Comments
7	Broker 2 reports the execution	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR124 symbol: XYZ eventTimestamp: 20180501T153039 manualFlag: true cancelFlag: false cancelTimestamp: quoteKeyDate: quoteID: quantity: 3000 price: 1.14 capacity: P tapeTradeID: ORF1234 marketCenterID: O~~N~~ sideDetailsInd: SELL sellDetails: orderKeyDate: 20180501T000000 orderID: O12346 side: SL	The *sideDetailsInd* must be marked as SELL. Side details are not required for the contra-side (buy side). In phase 2c, BRK2 will be required to populate a *quoteID* of Q6789 linking to the Quote Received event reported by the IDQS.

2.8.3. Trade Negotiated over the Phone

This scenario illustrates the CAT reporting requirements when a Market Maker executes a customer order as the result of a negotiation with another Industry Member over the phone. In this scenario, Market Maker 1 displays an unpriced quote on an IDQS indicating general interest in buying security XYZ. Broker 2 calls Market Maker 1 and negotiates a trade.

Market Maker 1 reports its side of the trade to the ORF as the executing party, and Broker 2 reports its side of the trade to the ORF as the contra party. The two sides of the trade are matched by the ORF and sent for clearing.
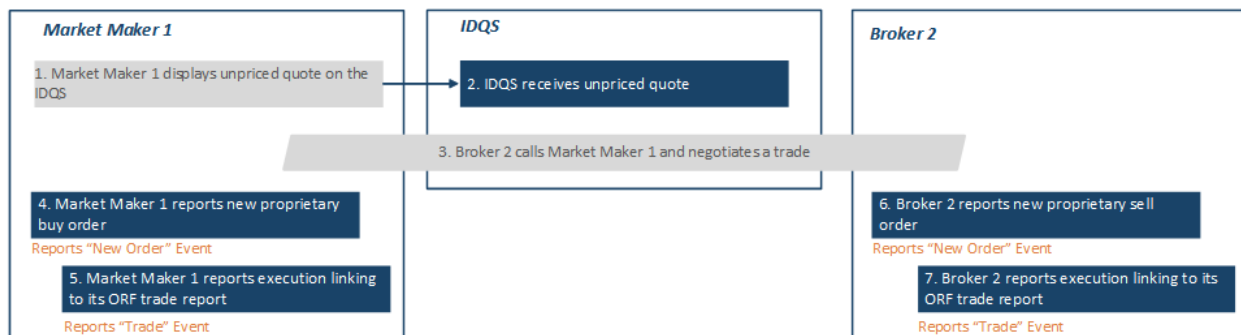
Industry Member Market Maker 1 is required to report the following in phase 2a:

- · A proprietary new buy order (New Order event)
- · An execution linking to its ORF trade report (Trade event)

Industry Member Broker 2 is required to report the following in phase 2a:

- · A new proprietary sell (New Order event)
- · An execution linking to its ORF trade report (Trade event)

The Industry Member IDQS will be required to report the following in phase 2a:

- · The receipt of Market Maker 1's unpriced quote (Quote Received event)

All of the New Order and Trade events occurring as a result of the negotiation must have the *negotiatedTradeFlag* and *sideDetailsInd* fields present and marked properly. Both Trade events reported by Marker Maker 1 and Broker 2 must link to their ORF report.

The negotiation between Market Maker 1 and Broker 2 is not reportable to CAT. The unpriced quote sent by Market Maker 1 to the IDQS is reportable to CAT by the IDQS.

| #	Step	Reported Event	Comments
1	Market Maker 1 sends an unpriced quote to the IDQS	*NA*	
2	IDQS receives the unpriced quote from Market Maker 1	*IDQS (IMID = IDQS) reports a* **Quote Received event** type: MEQR quoteKeyDate: 20180501T000000 quoteID: Q6789 symbol: XYZ receivedQuoteID: eventTimestamp: 20180501T153038.634456 receiverIMID: IDQS senderIMID: MMA onlyOneQuoteFlag: false bidPrice: 1.15 bidQty: 1000 mpStatusCode: open unsolicitedInd: B quoteWantedInd: A	The IDQS is required to report the receipt of the unpriced quote, with the *quoteWantedInd* populated indicating if a Bid is wanted or an Ask is wanted.
3	Trade is negotiated between Market Maker 1 and Broker 2	*NA*	

#	Step	Reported Event	Comments
4	Market Maker 1 generates a new proprietary order	*Market Maker 1 (IMID = MMA) reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false deptType: T side: B price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP1 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: true representativeInd: N	
5	Market Maker 1 reports the execution	*Market Maker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp: 20180501T153039 manualFlag: true cancelFlag: false cancelTimestamp: quoteKeyDate: quoteID: quantity: 3000 price: 1.14 capacity: P tapeTradeID: ORF1234 marketCenterID: ON sideDetailsInd: BUY buyDetails: orderKeyDate: 20180501T000000 orderID: O12345	The *sideDetailsInd* must be marked as BUY. Side details are not required for the contra-side (sell side). In Phase 2c, the *quoteID* would be left blank, as the unpriced quote sent by Market Maker 1 to the IDQS would not be reportable to CAT by either party.

#	Step	Reported Event	Comments
		side: B	
6	Broker 2 generates a new proprietary order	*Broker 2 (IMID = BRKB) reports a* **New Order event** type: MENO orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false deptType: T side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP2 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: true representativeInd: N	
7	Broker 2 reports the execution	*Broker 2 reports a* **Trade event** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR124 symbol: XYZ eventTimestamp: 20180501T153039 manualFlag: true cancelFlag: false cancelTimestamp: quoteKeyDate: quoteID: quantity: 3000 price: 1.14 capacity: P tapeTradeID: ORF1234 marketCenterID: ON sideDetailsInd: SELL sellDetails: orderKeyDate: 20180501T000000	The *sideDetailsInd* must be marked as SELL. Side details are not required for the contra-side (buy side). In Phase 2c, the *quoteID* would be left blank, as the unpriced quote sent by Market Maker 1 to the IDQS would not be reportable to CAT by either party.

#	Step	Reported Event	Comments
		orderID: O12346 side: SL	

2.8.4. Representative Order Executed as a Result of a Negotiation

This scenario illustrates the CAT reporting requirements when a Market Maker receives a customer order, and chooses to handle the customer order by generating a representative order to facilitate the execution. The Industry Member then submits an unsolicited displayed (bid) quote to an inter-dealer quotation system ("IDQS"), and the order is executed as the result of a negotiation. In this scenario, the customer order is filled on a Riskless Principal basis.
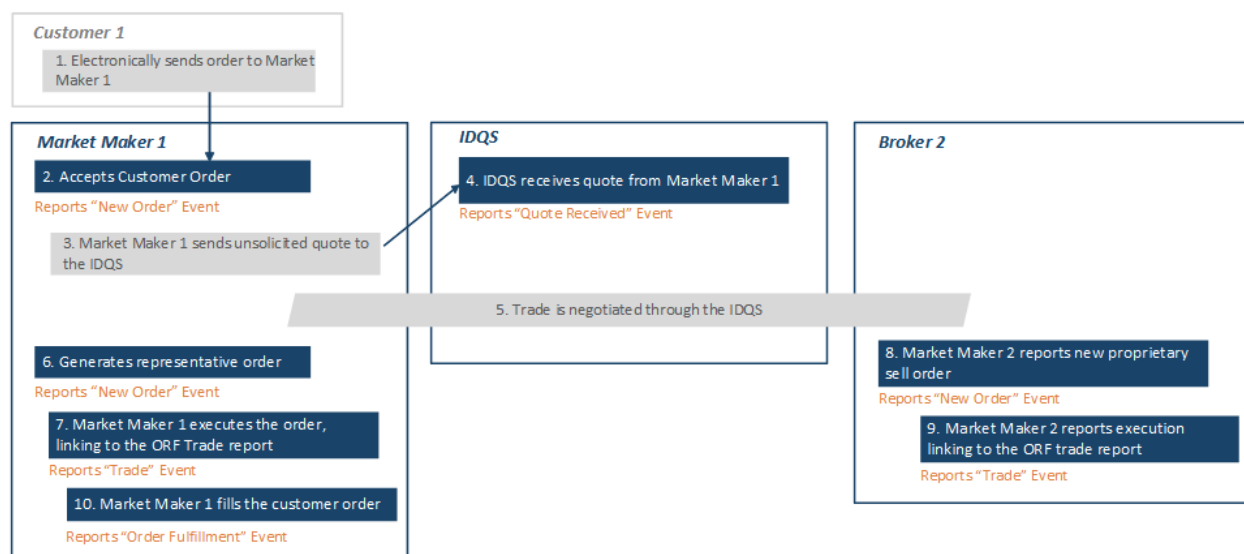
Industry Member Market Maker 1 is required to report the following in Phase 2a:

- · The receipt of the customer buy order (New Order event)
- · The origination of a representative proprietary buy order (New Order event)
- · The execution of the representative order linking to the ORF trade report (Trade event)
- · The fill of the customer order on a Riskless Principal basis (Order Fulfillment event)

Industry Member Broker 2 must report the following to CAT in Phase 2a:

- · A new proprietary sell order (New Order event)
- · An execution linking to the ORF trade report (Trade event)

The Industry Member IDQS will be required to report the following to CAT for Phase 2a:

- · The receipt of Market Maker 1's quote (Quote Received event)

All of the New Order and Trade events occurring as a result of the negotiation must have the *negotiatedTradeFlag* and *sideDetailsInd* fields present and marked properly. Both Trade events reported by Market Maker 1 and Broker 2 must link to the same ORF report.

In Phase 2c, Market Maker 1 will be required to report an MENQ reflecting the quote that was sent to the IDQS, and will be required to populate a quoteID in its MEOT linking to the quoteID in its MENQ event. In Phase 2c, Broker 2 will be required to populate a quoteID in its MEOT linking to the MEQR reported by the IDQS.

Reporting requirements for representative orders in OTC securities are the same as for NMS securities. Refer to Appendix C of the CAT Reporting Technical Specifications for Industry Members for additional information.

#	Step	Reported Event	Comments
1	Customer 1 sends an order to Market Maker 1	*NA*	
2	Market Maker 1 receives the order from Customer 1	*Market Maker 1 (IMID = MMA) reports a* **New Order event** type: MENO orderKeyDate: 20180501T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153034.234456 manualFlag: false deptType: T side: B price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1 accountHolderType: A affiliateFlag: false aggregatedOrders: negotiatedTradeFlag: false representativeInd: N	
3	Market Maker 1 sends a quote to the IDQS	*NA*	Market Maker 1 will be required to report a New Quote event in Phase 2c. The *quoteID* for this MENQ would be Q1234 in Phase 2c.

#	Step	Reported Event	Comments
4	The IDQS receives a quote from Market Maker 1	*IDQS (IMID = IDQS) reports a* **Quote Received event** type: MEQR quoteKeyDate: 20180501T000000 quoteID: Q6789 symbol: XYZ receivedQuoteID: Q1234 eventTimestamp: 20180501T153034.534456 receiverIMID: IDQS senderIMID: MMA onlyOneQuoteFlag: false bidPrice: 1.14 bidQty: 3000 mpStatusCode: open unsolicitedInd: B quoteWantedInd:	In Phase 2c, the IDQS will be required to link the Quote Received event to the New Quote event reported by Market Maker 1 through the *receivedQuoteID* field.
5	A trade is negotiated between Market Maker 1 and Broker 2 through the IDQS	*NA*	
6	Market Maker 1 generates a representative proprietary order	*Market Maker 1 (IMID = MMA) reports a* **New Order event** type: MENO orderKeyDate: 20180501T000000 orderID: REP12345 symbol: XYZ eventTimestamp: 20180501T153035.534456 manualFlag: false deptType: T side: B price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: REP1 accountHolderType: P affiliateFlag: false aggregatedOrders: O12345@20180501T000000@@ negotiatedTradeFlag: false representativeInd: Y	The *representativeInd* field must be populated with a value of 'Y' to indicate that this is a representative order, and that explicit linkage is required in Phase 2a. The *aggregatedOrders* field must be populated. If the order satisfies the criteria for use of the *representativeInd* value "YE", the Industry Member would be able to populate a *representativeInd* value of "YE" in this step without receiving a rejection in CAT.

#	Step	Reported Event	Comments
7	Market Maker 1 reports the execution	*Market Maker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp: 20180501T153039 manualFlag: true cancelFlag: false cancelTimestamp: quoteKeyDate: quoteID: quantity: 3000 price: 1.14 capacity: A tapeTradeID: ORF1234 marketCenterID: O sideDetailsInd: BUY buyDetails: orderKeyDate: 20180501T000000 orderID: REP12345 side: B	The *sideDetailsInd* must be marked as BUY. Side details are not required for the contra-side (sell side). In Phase 2c, MMA will be required to populate a *quoteID* of Q1234 linking to its New Quote Event.
8	Broker 2 generates a new proprietary order	*Broker 2 (IMID = BRKB) reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false deptType: T side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP2 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: true	

#	Step	Reported Event	Comments
		representativeInd: N	
9	Broker 2 reports the execution	*Broker 2 reports a* **Trade event** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR124 symbol: XYZ eventTimestamp: 20180501T153039 manualFlag: true cancelFlag: false cancelTimestamp: quoteKeyDate: quoteID: quantity: 3000 price: 1.14 capacity: P tapeTradeID: ORF1234 marketCenterID: O sideDetailsInd: SELL sellDetails: orderKeyDate: 20180501T000000 orderID: O12346 side: SL	The *sideDetailsInd* must be marked as SELL. Side details are not required for the contra-side (buy side). In Phase 2c, Broker 2 will be required to populate a *quoteID* of Q6789 linking to the Quote Received event reported by the IDQS.
10	Market Maker 1 fills the customer order	*Market Maker 1 reports an* **Order Fulfillment event** Type: MEOF fillKeyDate: 20180501T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20180501T153039.534456 manualFlag: false fulfillmentLinkType: Y quantity: 3000 price: 1.14 capacity: R clientDetails: orderKeyDate: 20180501T000000 orderID: O12345 side: B firmDetails:	The *fulfillmentLinkType* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage is required in Phase 2a. *firmDetails* are required.

#	Step	Reported Event	Comments
		orderKeyDate: 20180501T000000 orderID: REP12345 side: SL	

2.8.5.   Fill of a Customer Order at a Previously Displayed Quote

This scenario illustrates the CAT reporting requirements when a Market Maker displays a quote unrelated to any customer order flow, then receives a customer order. The Industry Member then executes the customer order due to a Manning obligation resulting from an execution against the previously displayed quote.
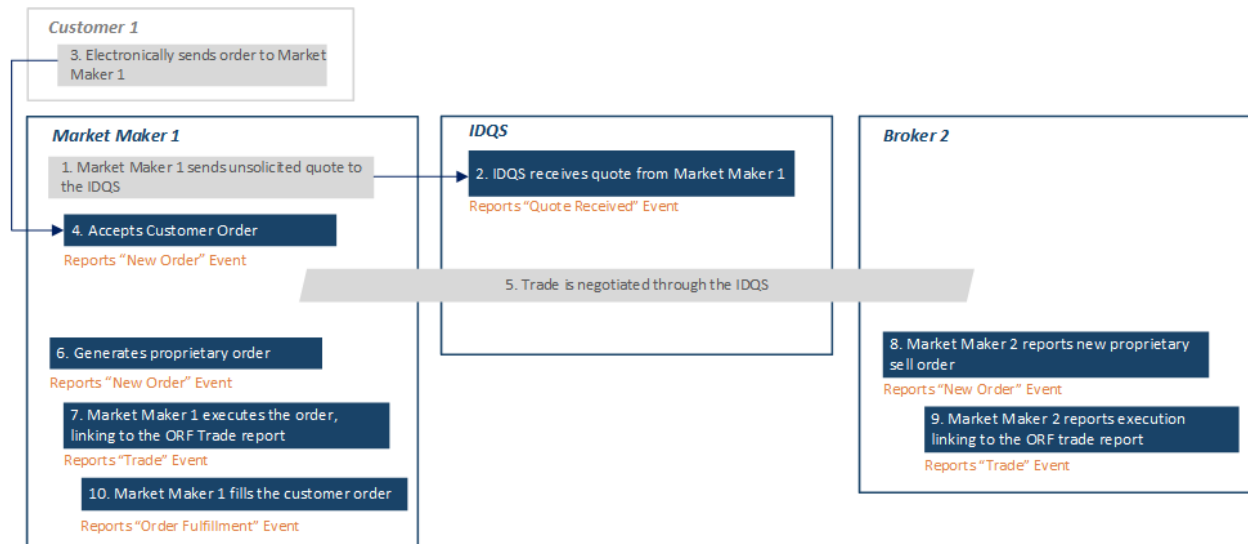
Industry Member Market Maker 1 is required to report the following in Phase 2a:

- ·   The receipt of the customer order (New Order event)
- ·   The origination of a proprietary buy order against the previously displayed quote (New Order event)
- ·   The execution of the proprietary order linking to the ORF trade report (Trade event)
- ·   The fill of the customer order on a Riskless Principal basis (Order Fulfillment event)

Industry Member Broker 2 must report the following to CAT in Phase 2a:

- ·   A new proprietary sell order (New Order event)
- ·   An execution linking to the ORF trade report (Trade event)

The Industry Member IDQS will be required to report the following to CAT for Phase 2a:

- ·   The receipt of Market Maker 1's quote (Quote Received event)

All of the New Order and Trade events occurring as a result of the negotiation must have the *negotiatedTradeFlag* and *sideDetailsInd* fields present and marked properly. Both Trade events reported by Market Maker 1 and Broker 2 must link to the same ORF report.

In Phase 2c, Market Maker 1 will be required to report an MENQ reflecting the quote that was sent to the IDQS, and will be required to populate a quoteID in its MEOT linking to the quoteID in its MENQ event. In Phase 2c, Broker 2 will be required to populate a quoteID in its MEOT linking to the MEQR reported by the IDQS.

Reporting requirements for representative orders in OTC securities are the same as for NMS securities. Refer to Appendix C of the CAT Reporting Technical Specifications for Industry Members for additional information.

#	Step	Reported Event	Comments
1	Market Maker 1 sends a quote to the IDQS	*NA*	Market Maker 1 will be required to report a New Quote event in Phase 2c. The *quoteID* for this MENQ would be Q1234 in Phase 2c.
2	The IDQS receives a quote from Market Maker 1	*IDQS (IMID = IDQS) reports a* **Quote Received event** type: MEQR quoteKeyDate: 20180501T000000 quoteID: Q6789 symbol: XYZ receivedQuoteID: eventTimestamp: 20180501T153034.234456 receiverIMID: IDQS senderIMID: MMA onlyOneQuoteFlag: false bidPrice: 1.14 bidQty: 3000 mpStatusCode: open unsolicitedInd: B quoteWantedInd:	In Phase 2c, the IDQS will be required to link the Quote Received event to the New Quote event reported by Market Maker 1 through the *receivedQuoteID* field.
3	Customer 1 sends an order to Market Maker 1	*NA*	
4	Market Maker 1 receives the order from Customer 1	*Market Maker 1 (IMID = MMA) reports a* **New Order event** type: MENO orderKeyDate: 20180501T000000 orderID: O12345	

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180501T153035.534456 manualFlag: false deptType: T side: B price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1 accountHolderType: A affiliateFlag: false aggregatedOrders: negotiatedTradeFlag: false representativeInd: N	
5	A trade is negotiated between Market Maker 1 and Broker 2 through the IDQS	*NA*	
6	Market Maker 1 generates a proprietary order	*Market Maker 1 (IMID = MMA) reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: O12350 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false deptType: T side: B price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID:PROP1 accountHolderType: P affiliateFlag: false aggregatedOrders: negotiatedTradeFlag: true representativeInd: N	The *representativeInd* field must be populated with a value of 'N' to indicate that this was not a representative order, as the principal order was not generated to facilitate the execution of a customer order. The *aggregatedOrders* field must not be populated. If the order generated by Broker 1 had been generated in a proprietary account where it was eligible to receive customer fills, the Industry Member would be able to populate a *representativeInd* value of "YE" in this step without receiving a rejection in CAT.
7	Market Maker 1 reports the execution	*Market Maker 1 reports a **Trade event***	The *sideDetailsInd* must be marked as BUY. Side details are not

#	Step	Reported Event	Comments
		type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp: 20180501T153039 manualFlag: true cancelFlag: false cancelTimestamp: quoteKeyDate: quoteID: quantity: 3000 price: 1.14 capacity: A tapeTradeID: ORF1234 marketCenterID: N sideDetailsInd: BUY buyDetails: orderKeyDate: 20180501T000000 orderID: O12350 side: B	required for the contra-side (sell side). In Phase 2c, MMA will be required to populate a *quoteID* of Q1234 linking to its New Quote Event.
8	Broker 2 generates a new proprietary order	*Broker 2 (IMID = BRKB) reports a* ***New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false deptType: T side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP2 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: true representativeInd: N	

| #	Step	Reported Event	Comments
9	Broker 2 reports the execution	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR124 symbol: XYZ eventTimestamp: 20180501T153039 manualFlag: true cancelFlag: false cancelTimestamp: quoteKeyDate: quoteID: quantity: 3000 price: 1.14 capacity: P tapeTradeID: ORF1234 marketCenterID: N sideDetailsInd: SELL sellDetails: orderKeyDate: 20180501T000000 orderID: O12346 side: SL	The *sideDetailsInd* must be marked as SELL. Side details are not required for the contra-side (buy side). In Phase 2c, Broker 2 will be required to populate a *quoteID* of Q6789 linking to the Quote Received event reported by the IDQS.
10	Market Maker 1 fills the customer order	*Market Maker 1 reports an **Order Fulfillment event*** Type: MEOF fillKeyDate: 20180501T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20180501T153039.534456 manualFlag: false fulfillmentLinkType: YP quantity: 3000 price: 1.14 capacity: R clientDetails: orderKeyDate: 20180501T000000 orderID: O12345 side: B firmDetails: orderKeyDate: 20180501T000000 orderID: O12350	The *fulfillmentLinkType* field must be populated with a value of 'YP' to indicate that the customer order is being filled from a pre-existing principal order, and that explicit linkage is required in Phase 2a. *firmDetails* are required.

#	Step	Reported Event	Comments
		side: SL	

2.9. Foreign Scenarios

This section illustrates the CAT reporting requirements when an Industry Member routes an order to a foreign destination for execution. These scenarios assume that the related security is CAT reportable in accordance with Section I of the CAT FAQs regarding Foreign Securities.

2.9.1. Route to a Foreign Broker-Dealer

This scenario illustrates the CAT reporting requirements when an Industry Member routes an order to another Industry Member, who routes the order to an affiliated foreign broker-dealer. Since the foreign broker-dealer is not a CAT reporter and the execution was not reported for public dissemination purposes in the United States, the Industry Member must report an Order Fulfillment event to represent the outcome of the customer order.
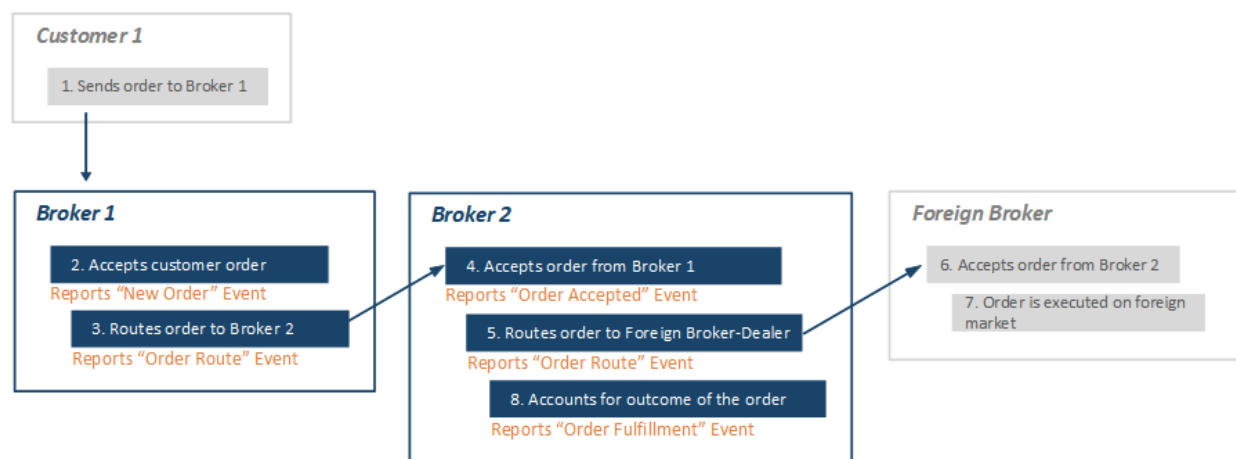
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the order to Broker 2 (Order Route event)

Industry Member Broker 2 is required to report:

- · The receipt of the order from Broker 1 (Order Accepted event)
- · The route of the customer order to the affiliated foreign broker-dealer (Order Route event)
- · The outcome of the order (Order Fulfillment event)

When reporting Order Fulfillment events for orders that were routed to a foreign broker-dealer, *firmDetails* are not required.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: FOR custDspIntrFlag: false firmDesignatedID: EFGHO001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the customer order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234556 manualFlag: false senderIMID: BRKA destination: BRKB destinationType: F routedOrderID: XYZ123555 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: FOR affiliateFlag: false~~true~~ isoInd: NA	

#	Step	Reported Event	Comments
4	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180501T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180501T153036.234556 manualFlag: true electronicDupFlag: false electronicTimestamp: receiverIMID: BRKB senderIMID: BRKA senderType: F routedOrderID: XYZ123555 affiliateFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: FOR isoInd: NA custDspIntrFlag: false	
5	Broker 2 routes the customer order to a non-reporting affiliated foreign broker-dealer	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180501T153035.234556 manualFlag: false senderIMID: destination: destinationType: N routedOrderID: side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: FOR affiliateFlag: true	When routing to a foreign broker-dealer, *destinationType* must be populated as 'N', and *tradingSession* must be populated as 'FOR'. *destination*, *senderIMID,* and *routedOrderID* are not required when routing to a foreign broker-dealer.

#	Step	Reported Event	Comments
		isoInd: NA	
6	Non-reporting Foreign Broker-Dealer accepts and executes the order	*NA*	
7	Broker 2 reports an Order Fulfillment event to show the outcome of the customer order	*Broker 1 reports an **Order Fulfillment event*** type: MEOF fillKeyDate: 20180501T000000 fulfillmentID: FRGN123 symbol: XYZ eventTimestamp: 20180501T153045.234556 fulfillmentLinkType: FOR quantity: 1000 price: 10.00 capacity: A clientDetails: orderKeyDate: 20180501T000000 orderID: O34567 side: B	The *fulfillmentLinkType* must be populated with a value of 'FOR' to indicate that the order was routed to a foreign destination, and that *firmDetails* are not required. The eventTimestamp in the Order Fulfillment event represents the time that the firm filled the customer order, not the time that the execution was received on the foreign market.

2.9.2. Customer Order is Routed to a Foreign Affiliate, and the Foreign Affiliate Executes the Order on a Net Basis

This scenario illustrates the CAT reporting requirements when an Industry Member receives an order from its customer to buy a foreign security and routes the order to a non-member foreign affiliate for execution. The foreign affiliate executes the order in the foreign market and the transaction is reported by the foreign market. The foreign affiliate sells the security to the Industry Member at a different price than the price reported in the foreign market. The Industry Member fills the customer order at the same price at which it bought the security from its foreign affiliate (except for any change in price due to currency conversion).

Since the price given to the Industry Member by the foreign affiliate was different than the price that the foreign affiliate received on the foreign market, the Industry Member is required to submit a media trade report to a TRF in the United States. In the TRF report, the FINRA member firm will be identified as the executing firm on the trade report with a blank contra.

Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)

- The route of the order to its foreign affiliate (Order Route event)

- The execution of the order in the foreign market (one-sided Trade event linking to the TRF report with an *sideDetailsInd* of 'BUY')

Broker 1 is required to report the execution of the order on the foreign market using a Trade event with linkage to the TRF report. Broker 1 is only required to report its own side of the execution in the Trade event side details. The *sideDetailsInd* field must be populated with a value of 'BUY', indicating that the Trade event is one sided, and that only the *bBuy Details* will be populated.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 receives the Buy order from the customer	*Broker 1 (IMID=FRMA) reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: A side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: FOR custDspIntrFlag: false firmDesignatedID: INC123 accountHolderType: A	

#	Step	Reported Event	Comments
		affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to a foreign affiliate	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143032.53456 manualFlag: false senderIMID: destination: destinationType: N routedOrderID: side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: FOR affiliateFlag: true isoInd: NA	When *destinationType* is populated as 'N', *senderIMID, destination,* and *routedOrderID* are not required.
5	Foreign affiliate accepts the order from Broker 1 and executes the order in the foreign market @9.97	*NA*	This transaction is reported by to the foreign market.
6	Foreign affiliate sells the shares to Broker 1 @10.01	*NA*	Since the foreign affiliate received a price of 9.97 on the foreign market, and sold the shares to Broker 1 a price of 10.01, Broker 1 is required to report a media trade report in the US.
7	Broker 1 reports the trade to the TRF and reports a one-sided Trade event @10.01	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20170801T000000 tradeID: TXYZ125 symbol: XYZ eventTimestamp: 20170801T143035.53456 manualFlag: false cancelFlag: false cancelTimestamp:	Since Broker 1 reported the trade to the TRF, Broker 1 must populate all relevant fields required to link to the related trade report. In this scenario, Broker 1 is only required to report its own side in the Trade event side details. The *sideDetailsInd* field must be populated with a value of 'BUY' indicating that only the *buyD details* are populated.

#	Step	Reported Event	Comments
		quantity: 300 price: 10.01 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: BUY buyDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B	

2.9.3. Customer Order is Routed to a Foreign Broker-Dealer and Executed on a Riskless Principal Basis

This scenario illustrates the CAT reporting requirements when an Industry Member routes a customer order on a Riskless Principal basis to a foreign broker-dealer for execution. In this scenario, the Industry Member receives a customer order and generates a representative order, then routes the representative order to a foreign broker-dealer.

The foreign broker-dealer executes the order in the foreign market and the transaction is reported by the foreign market. The foreign broker-dealer sells the security to the Industry Member at the same price that was reported in the foreign market. The Industry Member fills the customer order at the same price at which it bought the security from its foreign affiliate (except for any change in price due to currency conversion).

Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)

- The generation of a representative order (New Order event)
- The route of the representative order (Order Route event)
- The execution representative order (Order Fulfillment event with a *fulfillmentLinkType* of 'FOR')
- The fill of the customer order (Order Fulfillment event with a *fulfillmentLinkType* of 'Y')

In phase 2a, explicit linkage between the customer order and the representative order is required, since the representative order was originated specifically to represent a single customer order and there is: 1) an existing direct electronic link in the firm's system between the order being represented and the representative order, and 2) any resulting executions are immediately and automatically applied to the represented order in the firm's system.

fFirmD details are not required on Order Fulfillment events with a *fulfillmentLinkType* of 'FOR' representing orders that were routed to a foreign broker-dealer.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 receives the Buy order from the customer	*Broker 1 (IMID=FRMA) reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: A side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: FOR custDspIntrFlag: false firmDesignatedID: INC123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 generates a representative order	*Broker 1 (IMID=FRMA) reports a* **New Order event** type: MENO orderKeyDate: 20170801T000000	The *representativeInd* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage is required in Phase 2a.

#	Step	Reported Event	Comments
		orderID: R12345 symbol: XYZ eventTimestamp: 20170801T143032.223456 manualFlag: false deptType: A side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: FOR custDspIntrFlag: false firmDesignatedID: REP125 accountHolderType: P aggregatedOrders: O12345@20170801T000000@@ affiliateFlag: false negotiatedTradeFlag: false representativeInd: Y	The *aggregatedOrders* field must be populated.
4	Broker 1 routes the Representative Order to a foreign broker-dealer	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: R12345 symbol: XYZ eventTimestamp: 20170801T143032.53456 manualFlag: false senderIMID: destination: destinationType: N routedOrderID: side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	When *destinationType* is populated as 'N', *senderIMID, destination* and *routedOrderID* are not required.
5	Foreign affiliate accepts the order from Broker 1 and executes the order in the foreign market	*NA*	This transaction is reported by to the foreign market.

| #	Step	Reported Event	Comments
	@10.01		
6	Foreign affiliate sells the shares to Broker 1 @10.01	*NA*	Since the transaction was reported to the foreign market at a price of 10.01, and the foreign broker-dealer sold the shares to Broker 1 a price of 10.01, Broker 1 is not required to report a media trade report in the US.
7	Broker 1 reports an Order Fulfillment event to show the outcome of the representative order	*Broker 1 reports an **Order Fulfillment event*** Type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20170801T143035.53456 manualFlag: false fulfillmentLinkType: FOR quantity: 300 price: 10.01 capacity: P clientDetails: orderKeyDate: 20170801T000000 orderID: R12345 side: B	The *fulfillmentLinkType* must be populated with a value of 'FOR' to indicate that the order was routed to a foreign destination, and that *firmDetails* are not required. Although the order being filled on the foreign exchange is a representative proprietary order, the *clientDetails* must be populated with the *orderID* of the representative proprietary order.
8	Broker 1 executes the customer order on a Riskless Principal basis	*Broker 1 reports an **Order Fulfillment event*** Type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO12360 symbol: XYZ eventTimestamp: 20170801T143035.63456 manualFlag: false fulfillmentLinkType: Y quantity: 300 price: 10.01 capacity: R clientDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B firmDetails: orderKeyDate: 20170801T000000	The *fulfillmentLinkType* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage is required in Phase 2a. *firmDetails* are required.

#	Step	Reported Event	Comments
		orderID: R12345 side: SL	

2.10. Electronic Duplicate Scenarios

This section illustrates the CAT reporting requirements when an Industry Member routes or receives an order manually and then subsequently sends or receives an electronic message to represent the manual instruction. Refer to Section 3.2.2 of the CAT Reporting Technical Specifications for Industry Members for additional information.

2.10.1. Manual Order Route Followed by Electronic Route, Merged Event

This scenario illustrates the CAT reporting requirements when an Industry Member manually routes an order to another Industry Member and follows up with an electronic route message. In this scenario, both parties report a 'merged' event.
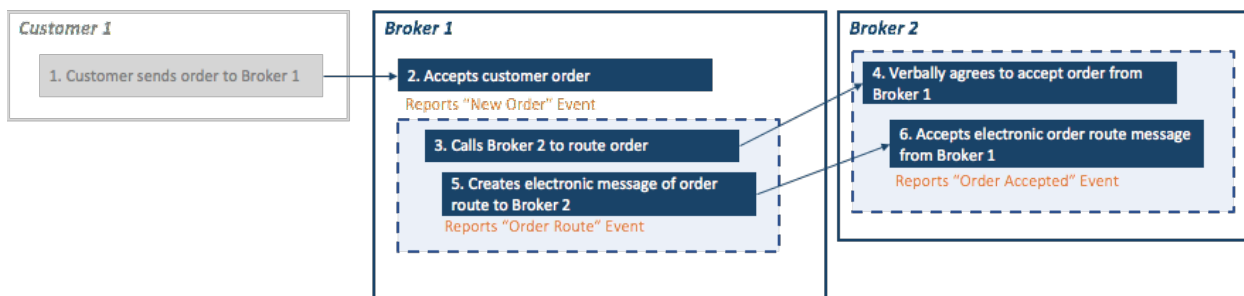
Industry Member Broker 1 is required to report:

· The receipt of the customer order (New Order event)
· The route of the order to Broker 2 (Order Route event)

Industry Member Broker 2 is required to report:

· The receipt of the order from Broker 1 (Order Route event)

When reporting a 'merged' event, Industry Members are required to report both the *eventTimestamp* and the *electronicTimestamp*, along with a *routedOrderID*. The *electronicDupFlag* must be set to 'false' and the *manualFlag* must be set to 'true' on a 'merged' event.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the	*Broker 1 reports a **New Order***	

#	Step	Reported Event	Comments
	customer order	*event* type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.123456 manualFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 calls Broker 2 to route the order		
4	Broker 2 verbally accepts the order		
5	Broker 1 creates an electronic order route message and sends the message to Broker 2	*Broker 1 (IMID = FRMA) reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143036 manualFlag: true electronicDupFlag: false electronicTimestamp: 20180417T143040.123456 senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: RT5678 side: B price: 9.99 quantity: 1000 orderType: LMT	Broker 1 reports a merged event for the Order Route event. *electronicDupFlag* must be set to 'false' on merged events. The *eventTimestamp* on the Order Route event must capture the time at which Broker 1 called Broker 2 in step 3 (with granularity to at least seconds). The *electronicTimestamp* must be the time at which the electronic route was sent and must be reported to millisecond granularity.

#	Step	Reported Event	Comments
		timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
6	Broker 2 accepts the electronic order route message	*Broker 2 (IMID = FRMB) reports an* ***Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T143036 manualFlag: true electronicDupFlag: false electronicTimestamp: 20180417T143040.126456 receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: RT5678 affiliateFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	Broker 2 reports a merged event for the Order Accepted event. *electronicDupFlag* must be set to 'false' on merged events. The *eventTimestamp* on the Order Accepted event must capture the time at which Broker 2 agreed to take the order from Broker 1 in step 4 (with granularity to at least seconds). The *electronicTimestamp* must be the time at which the electronic route was received and must be reported to millisecond granularity.

2.10.2. Manual Order Route, Electronic Duplicate Order

This scenario illustrates the Phase 2a reporting requirements when an Industry Member manually routes an order but is unable to merge the manual and electronic copies of the order into a single message for CAT Reporting.
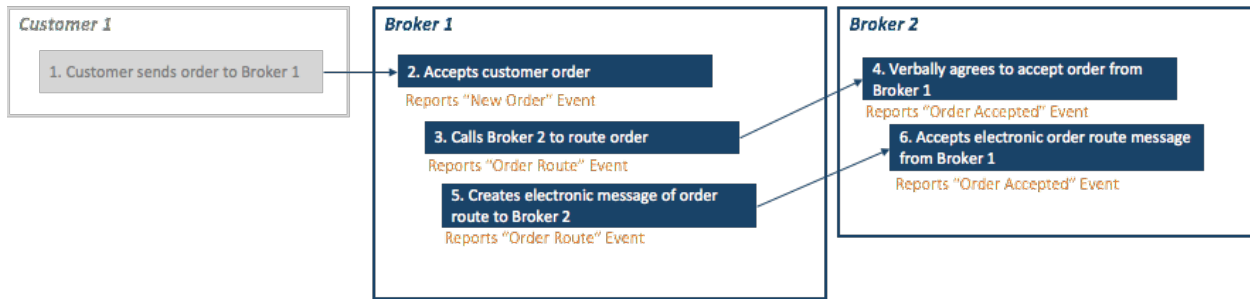
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The manual route to Broker 2 (Order Route event)
- The electronic route message sent to Broker 2 (Order Route event with *electronicDupFlag* populated as 'true')

Industry Member Broker 2 is required to report:

- The receipt of the route from Broker 1 (Order Accepted event)
- The receipt of the electronic route message from Broker 1 (Order Accepted event with *electronicDupFlag* populated as 'true')

When reporting the electronic duplicate event, the *electronicDupFlag* must be populated as 'true', and the *manualFlag* must be populated as 'false'. The *routedOrderID* field is not required on the events reflecting the manual route by Broker 1 and the manual receipt by Broker 2, but is required on the events reflecting the receipt of the duplicate electronic message. The *orderID* on the event reflecting the manual order receipt by Broker 2 must not be the same as the *orderID* on the event reflecting the receipt of the duplicate electronic message.

In phase 2a, ~~the~~ Industry Members are not required to populate the *manualOrderID* field. This field is required in phase 2c. When the *manualOrderID* field is populated, the *manualOrderKeyDate* must also be populated in order to generate a Manual Order Key to link to the electronic duplicate event to the original manual event.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456	

| #	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180417T143035.123456 manualFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 calls Broker 2 to route the order	*Broker 1 (IMID = FRMA) reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143036 manualFlag: true electronicDupFlag: false electronicTimestamp: senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	*routedOrderID* is not required on orders routed manually. *electronicTimestamp* is not required, as the systemization of the route is being captured in a separate event.
4	Broker 2 verbally accepts order	*Broker 2 (IMID = FRMB) reports an* **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000	*routedOrderID* is not required on orders received manually. *electronicTimestamp* is not required, as the systemization of the order is being captured in a separate event.

#	Step	Reported Event	Comments
		orderID: O34567E symbol: XYZ eventTimestamp: 20180417T143036 manualFlag: true electronicDupFlag: false electronicTimestamp: receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: affiliateFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Broker 1 creates an electronic order route message and sends to Broker 2	*Broker 1 (IMID = FRMA) reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143040.123456 manualFlag: false electronicDupFlag: true electronicTimestamp: senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: RT5678 side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	The *electronicDupFlag* must be set to 'true', indicating that this event is the electronic copy of a previously reported event. When *electronicDupFlag* is populated as 'true', *manualFlag* must be populated as 'false'. *electronicTimestamp* is not required when *electronicDupFlag* is 'true'. *routedOrderID* is required when *electronicDupFlag* is 'true'. The orderID on the duplicative electronic message must match the internal orderID. Linkage is not being attempted until Phase 2c.
6	Broker 2 accepts the	*Broker 2 (IMID = FRMB) reports an*	The *electronicDupFlag* must be set to 'true', indicating that this event is

#	Step	Reported Event	Comments
	electronic order route message	***Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567FIX symbol: XYZ eventTimestamp: 20180417T143040.126456 manualFlag: false electronicDupFlag: true electronicTimestamp: receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: RT5678 manualOrderKeyDate: 20180417T000000 manualOrderID: O34567E affiliateFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	the electronic copy of a previously reported event. When *electronicDupFlag* is populated as 'true', *manualFlag* must be populated as 'false'. *electronicTimestamp* is not required when *electronicDupFlag* is 'true'. *routedOrderID* is required when *electronicDupFlag* is 'true'. The internal *orderID* is different than the manual Order Accepted event. The Industry Member assigns a new orderID upon receipt of the electronic message. Optional in Phase 2a, the Industry Member may capture the *manualOrderID* (O34567E) to reference the manual order that was previously reported. When *manualOrderID* is populated, *manualOrderKeyDate* must also be populated.

2.10.3. Manual Order, One Side Reports Merged Event

This scenario illustrates the Phase 2a reporting requirements when an Industry Member manually routes an order to anther Industry Member. The routing Industry Member chooses to report a single 'merged' order event with both an *eventTimestamp* and an *electronicTimestamp*, and the receiving Industry Member reports separate events for the receipt of the manual order and the receipt of the electronic message.
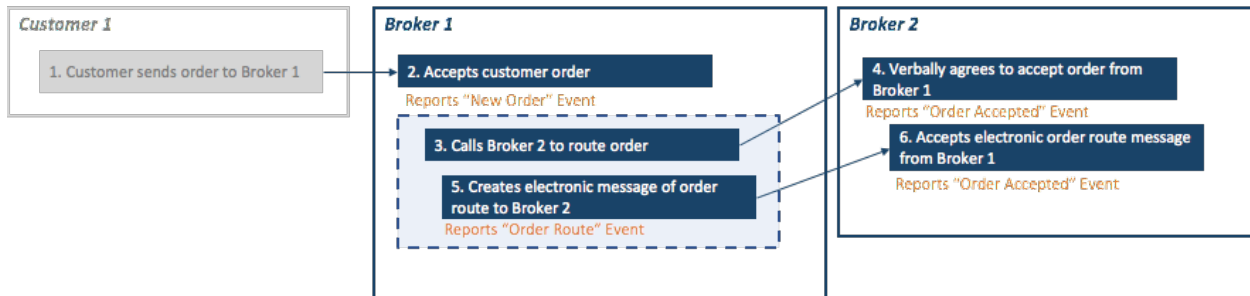
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The route of the order to Broker 2 (Order Route event)

When reporting a 'merged' event, Broker 1 is required to report both the *eventTimestamp* and the *electronicTimestamp*, along with a *routedOrderID*. The *electronicDupFlag* must be set to 'false' and the *manualFlag* must be set to 'true' on the 'merged' event.

Industry Member Broker 2 is required to report:

- The manual receipt of the order from Broker 1 (Order Accepted event)
- The receipt of the electronic route message from Broker 1 (Order Accepted event with *electronicDupFlag* populated as 'true')

When reporting the electronic duplicate event, Broker 2 is required to populate the *electronicDupFlag* as 'true', and the *manualFlag* as 'false'. The *routedOrderID* field is not required on the event reflecting the manual receipt of the order, but is required on the event reflecting the receipt of the duplicate electronic message. The *orderID* on the event reflecting the manual order receipt by Broker 2 must not be the same as the *orderID* on the event reflecting the receipt of the duplicate electronic message.

In phase 2a, ~~the~~ Broker 2 is not required to populate the *manualOrderID* field on electronic duplicate events. This field is required in phase 2c. When the *manualOrderID* field is populated, the *manualOrderKeyDate* must also be populated in order to generate a Manual Order Key to link to the electronic duplicate event to the original manual event.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event***	

#	Step	Reported Event	Comments
		type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.123456 manualFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 calls Broker 2 to route the order		
4	Broker 2 verbally accepts the order route	*Broker 2 (IMID = FRMB) reports an* ***Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567E symbol: XYZ eventTimestamp: 20180417T143036 manualFlag: true electronicDupFlag: false electronicTimestamp: receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: affiliateFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG	*routedOrderID* is not required on orders received manually. *electronicTimestamp* is not required, as the systemization of the order is being captured in a separate event.

| #	Step	Reported Event	Comments
		isoInd: NA custDspIntrFlag: false	
5	Broker 1 creates an electronic order route message and sends to Broker 2	*Broker 1 (IMID = FRMA) reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143036 manualFlag: true electronicDupFlag: false electronicTimestamp: 20180417T143040.123456 senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: RT5678 side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	Broker 1 reports a merged event for the Order Route. *electronicDupFlag* must be set to 'false' on merged events. The *eventTimestamp* on the Order Route event must capture the time at which Broker 1 called Broker 2 in step 3 (with granularity to at least seconds). The electronicTimestamp must be the time at which the electronic route was sent and must be reported to millisecond granularity.
6	Broker 2 accepts the electronic order route message	*Broker 2 (IMID = FRMB) reports an* **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567FIX symbol: XYZ eventTimestamp: 20180417T143040.126456 manualFlag: false electronicDupFlag: true electronicTimestamp: receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: RT5678 manualOrderKeyDate: 20180417T000000 manualOrderID: O34567E	The *electronicDupFlag* must be set to 'true', indicating that this event is the electronic copy of a previously reported event. When *electronicDupFlag* is populated as 'true', *manualFlag* must be populated as 'false'. *electronicTimestamp* is not required when *electronicDupFlag* is 'true'. *routedOrderID* is required when *electronicDupFlag* is 'true'. The internal *orderID* is different than the manual Order Accepted event. The Industry Member assigns a new orderID upon receipt of the electronic message. Optional in Phase 2a, the Industry

#	Step	Reported Event	Comments
		affiliateFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	Member may capture the *manualOrderID* (O34567E) to reference the manual order that was previously reported. When *manualOrderID* is populated, *manualOrderKeyDate* must also be populated.

2.11. Child Order Scenarios

This section illustrates the CAT reporting requirements when an order is sliced within the desk or department it is being worked. 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. Refer to Section 4.6 of the CAT Reporting Technical Specifications for Industry Members for additional information.

2.11.1. Industry Member Creates Child Orders and Routes

This scenario illustrates the CAT reporting requirements when an Industry Member receives a customer order and splits the customer order into multiple child orders before further handling. This scenario illustrates the reporting requirements for generating child orders, and does not reflect further order handling.
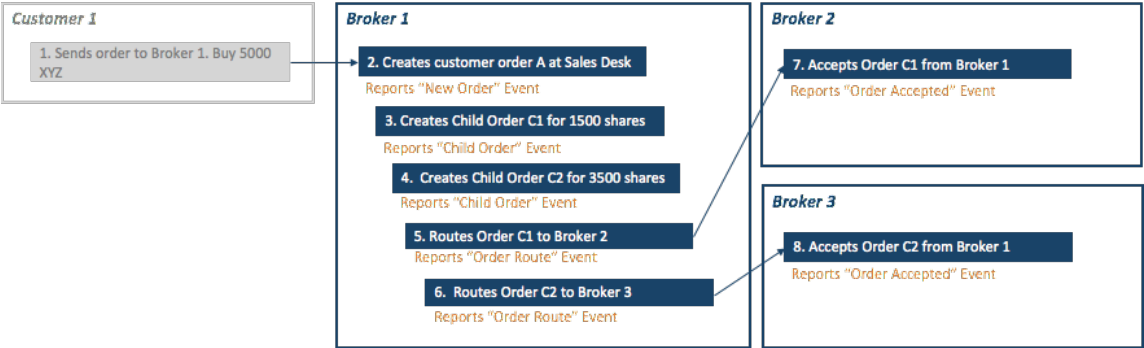
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The generation of each child order (Child Order event)
- · The route of each child order (Order Route event)

Industry Members Broker 2 and 3 are required to report:

· The receipt of each order from Broker 1 (Order Route event)

#	Step	Reported Event	Comments
1	Customer sends the order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180424T000000 orderID: O11235 symbol: XYZ eventTimestamp: 20180424T113018.123456 manualFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ID09876 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 generates two child orders from the customer order. Order 1 of 2, C12345 for 1500.	*Broker 1 reports a **Child Order event*** type: MECO orderKeyDate: 20180424T000000 orderID: C12345 symbol: XYZ parentOrderKeyDate: 20180424T000000 parentOrderID: O11235 eventTimestamp: 20180424T113018.323456 side: B price: 10.00 quantity: 1500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG	Upon generation of the child order, Broker 1 assigns a new Order Key with *orderID* C12345. The Parent Order Key with *orderID* O11235 must be populated in the *parentOrderID* field. The Parent Order Key links the Child Order event with the New Order event.

#	Step	Reported Event	Comments
4	Broker 1 generates two child orders from the customer order. Order 2 of 2, C22345 for 3500	*Broker 1 reports a **Child Order event*** type: MECO orderKeyDate: 20180424T000000 orderID: C22345 symbol: XYZ parentOrderKeyDate: 20180424T000000 parentOrderID: O11235 eventTimestamp: 20180424T113018.323457 side: B price: 10.00 quantity: 3500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG	Upon generation of the child order, Broker 1 assigns a new Order Key with *orderID* C22345. The Parent Order Key with *orderID* O11235 must be populated in the *parentOrderID* field. The Parent Order Key links the Child Order event with the New Order event.
5	Broker 1 routes Child Order C12345 to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180424T000000 orderID: C12345 symbol: XYZ eventTimestamp: 20180424T113018.343456 manualFlag: false senderIMID: BRKR1 destination: FRM2 destinationType: F routedOrderID: RTC1 side: B price: 10.00 quantity: 1500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false isoInd: NA	
6	Broker 1 routes Child Order C22345 to Broker 3	*Broker 1 reports an **Order Route event*** type: MEOR	

#	Step	Reported Event	Comments
		orderKeyDate: 20180424T000000 orderID: C22345 symbol: XYZ eventTimestamp: 20180424T113018.343457 manualFlag: false senderIMID: BRKR1 destination: FRM3 destinationType: F routedOrderID: RTC2 side: B price: 10.00 quantity: 3500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false isoInd: NA	
7	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180424T000000 orderID: O28765 symbol: XYZ eventTimestamp: 20180424T113018.543456 manualFlag: false receiverIMID: FRM2 senderIMID: BRKR1 senderType: F routedOrderID: RTC1 affiliateFlag: false deptType: T side: B price: 10.00 quantity: 1500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG isoInd: NA custDspIntrFlag: false	
8	Broker 3 accepts the order from Broker 1	*Broker 3 reports an **Order Accepted event*** type: MEOA	

#	Step	Reported Event	Comments
		orderKeyDate: 20180424T000000 orderID: O3A1B2C symbol: XYZ eventTimestamp: 20180424T113018.543458 manualFlag: false receiverIMID: FRM3 senderIMID: BRKR1 senderType: F routedOrderID: RTC2 affiliateFlag: false deptType: T side: B price: 10.00 quantity: 3500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG isoInd: NA custDspIntrFlag: false	

2.11.2. Industry Member Creates Multiple Branches of Child Orders

This scenario illustrates the CAT reporting requirements when an order is handled at multiple desks within an Industry Member, and each desk has chosen to work an order by splitting the original order into multiple child orders. This scenario illustrates the reporting requirements for generating child orders, and does not reflect further order handling.
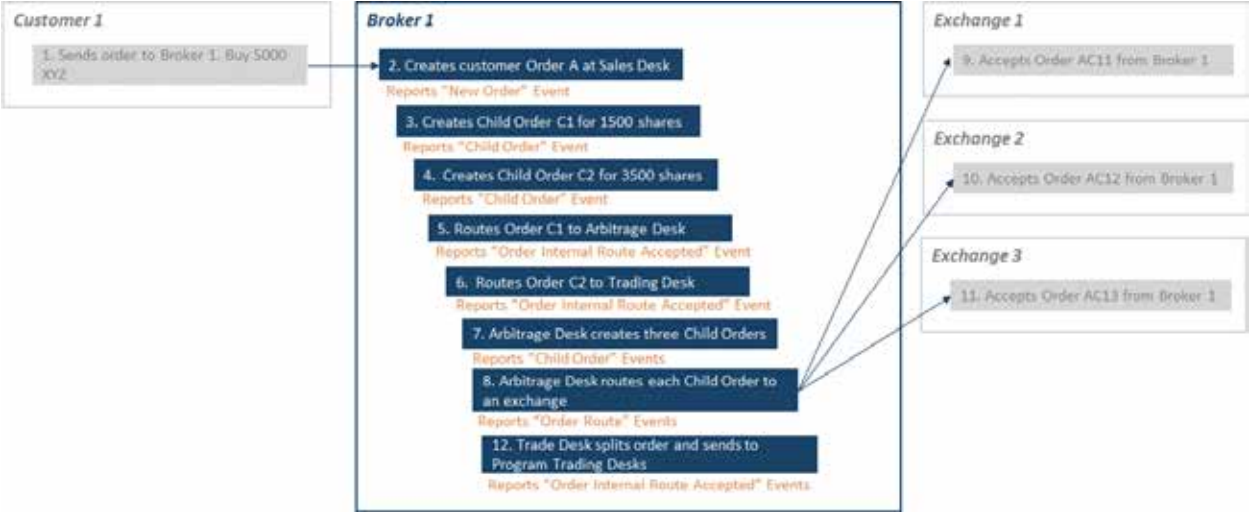
Industry Member Broker 1 must report the following for each desk:

- · At the Sales Desk:
  - ᴡ The receipt of the customer (New Order event)
  - ᴡ The generation of each child order (Child Order events)
- · At the Arbitrage Desk:
  - ᴡ The receipt of the internal route from the Sales Desk (Order Internal Route Accepted event)
  - ᴡ The generation of each child order (Child Order events)
  - ᴡ The route of each child order (Order Route event)
- · At the Trading Desk:
  - ᴡ The receipt of the internal route from the Sales Desk (Order Internal Route Accepted event)
- · At the Program Trading desk:
  - ᴡ The receipt of the internal route from the Trading Desk (Order Internal Route Accepted event)

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180424T000000 orderID: O11235 symbol: XYZ eventTimestamp: 20180424T113018.123456 manualFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ID09876 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3, 4	Broker 1 creates 2 child orders from Order A	*Broker 1 reports a **Child Order event (1 of 2)*** type: MECO orderKeyDate: 20180424T000000 orderID: C12345	Upon generation of each child order, Broker 1 assigns a new Order Key with *orderIDs* C12345 and C22345. The Parent Order Key with *orderID* O11235 must be populated in the *parentOrderID* field on each Child Order event. The Parent Order Key

#	Step	Reported Event	Comments
		symbol: XYZ parentOrderKeyDate: 20180424T000000 parentOrderID: O11235 eventTimestamp: 20180424T113018.323456 side: B price: 10.00 quantity: 1500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG *Broker 1 reports a **Child Order event (2 of 2)*** type: MECO orderKeyDate: 20180424T000000 orderID: C22345 symbol: XYZ parentOrderKeyDate: 20180424T000000 parentOrderID: O11235 eventTimestamp: 20180424T113018.323457 side: B price: 10.00 quantity: 3500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG	links the Child Order events with the New Order event.
5	Child Order 1 is internally routed to the Arbitrage Desk	*Broker 1 reports an **Order Internal Route Accepted event*** type: MEIR orderKeyDate: 20180424T000000 orderID: C12345 symbol: XYZ eventTimestamp: 20180424T113018.323656 manualFlag: false deptType: T receivingDeskType: AR side: B price: 10.00 quantity: 1500 orderType: LMT	Broker 1 does not assign a new *orderID* to the Order Internal Route Accepted event.

#	Step	Reported Event	Comments
		timeInForce: DAY=~~20170801~~20180424 tradingSession: REG	
6	Child Order 2 is internally routed to the Trading Desk	*Broker 1 reports an **Order Internal Route Accepted event*** type: MEIR orderKeyDate: 20180424T000000 orderID: C22345 symbol: XYZ eventTimestamp: 20180424T113018.323657 manualFlag: false deptType: T receivingDeskType: T side: B price: 10.00 quantity: 3500 orderType: LMT timeInForce: DAY=~~20170801~~20180424 tradingSession: REG	Broker 1 does not assign a new *orderID* to the Order Internal Route Accepted event.
7	The Arbitrage Desk splits the order and creates three child orders	*Broker 1 reports a **Child Order event (1 of 3)*** type: MECO orderKeyDate: 20180424T000000 orderID: AC112345 symbol: XYZ parentOrderKeyDate: 20180424T000000 parentOrderID: C12345 eventTimestamp: 20180424T113018.324656 side: B price: 10.00 quantity: 400 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG *Broker 1 reports a **Child Order event (2 of 3)*** type: MECO orderKeyDate: 20180424T000000	Upon generation of each child order, Broker 1 assigns a new Order Key with *orderIDs* AC112345 and AC122345 and AC132345. The Parent Order Key with *orderID* C12345 must be populated in the *parentOrderID* field on each Child Order event. The Parent Order Key links the parent Order Internal Route Accepted event.

#	Step	Reported Event	Comments
		orderID: AC122345 symbol: XYZ parentOrderKeyDate: 20180424T000000 parentOrderID: C12345 eventTimestamp: 20180424T113018.324657 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG *Broker 1 reports a **Child Order** **event (3 of 3)*** type: MECO orderKeyDate: 20180424T000000 orderID: AC132345 symbol: XYZ parentOrderKeyDate: 20180424T000000 parentOrderID: C12345 eventTimestamp: 20180424T113018.324658 side: B price: 10.00 quantity: 600 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG	
8	The Arbitrage Desk routes each child order to an exchange	*Broker 1 reports an **Order Route** **event (1 of 3)*** type: MEOR orderKeyDate: 20180424T000000 orderID: AC112345 symbol: XYZ eventTimestamp: 20180424T113018.325656 manualFlag: false senderIMID: BRKR1 destination: EXCH1 destinationType: E routedOrderID: RTAC11 session: s5	

#	Step	Reported Event	Comments
		side: B price: 10.00 quantity: 400 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false isoInd: NA *Broker 1 reports an **Order Route** event (2 of 3)* type: MEOR orderKeyDate: 20180424T000000 orderID: AC122345 symbol: XYZ eventTimestamp: 20180424T113018.325657 manualFlag: false senderIMID: BRKR1 destination: EXCH2 destinationType: E routedOrderID: RTAC12 session: s6 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false isoInd: NA	
8	(cont'd from above)	*Broker 1 reports an **Order Route** event (3 of 3)* type: MEOR orderKeyDate: 20180424T000000 orderID: AC132345 symbol: XYZ eventTimestamp: 20180424T113018.325658 manualFlag: false senderIMID: BRKR1 destination: EXCH3 destinationType: E routedOrderID: RTAC13 session: s7	

#	Step	Reported Event	Comments
		side: B price: 10.00 quantity: 600 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false isoInd: NA	
9	Exchange 1 accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	
10	Exchange 2 accepts the order from Broker 1	*EXCH2 reports a Participant **Order Accepted event***	
11	Exchange 3 accepts the order from Broker 1	*EXCH3 reports a Participant **Order Accepted event***	
12	The Trading Desk splits the order and sends to two different Program Trading Desks	*Broker 1 reports an **Order Internal Route Accepted event (1 or 2)*** type: MEIR orderKeyDate: 20180424T000000 orderID: C22345 symbol: XYZ eventTimestamp: 20180424T113018.343657 manualFlag: false deptType: T receivingDeskType: PT side: B price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG *Broker 1 reports an **Order Internal Route Accepted event (2 or 2)*** type: MEIR orderKeyDate: 20180424T000000 orderID: C22345 symbol: XYZ eventTimestamp: 20180424T113018.343658 manualFlag: false deptType: T receivingDeskType: PT side: B	Broker 1 does not assign a new *orderID* to the Order Internal Route Accepted event.

#	Step	Reported Event	Comments
		price: 10.00 quantity: 1500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	

2.12. Proprietary Order Scenarios

This section illustrates the CAT reporting requirements for proprietary orders.

2.12.1. Unsolicited Cancellation of a Proprietary Order by an Exchange

This scenario illustrates the CAT reporting requirements when an Industry Member routes a proprietary order to an exchange and the exchange cancels the order without receiving an explicit cancel request. In this scenario, Industry Member Broker 1 receives a proprietary order, and routes the order to an exchange for execution. The exchange accepts the order, then cancels the order without receiving an explicit cancel request. The requirements in this scenario would be the same if the order had been routed to another Industry Member rather than an exchange.

Note that there is a distinction from implicit cancels, such as IOC orders or DFD messages. In these cases, Industry Members would not have to report a cancellation because it's implied by the circumstances.

The reporting requirements in this scenario depend on the actions taken by Broker 1 upon receipt of the unsolicited cancellation from the exchange. Broker 1 is not required to report the unsolicited cancellation by the exchange. However, Broker 1 is required to report any action that it takes on the order as a result of the unsolicited cancellation, including a cancellation of the order on its own books and records, as outlined in Option 1.

If the order remains open on Broker 1's books and records after receipt of the unsolicited cancellation, Broker 1 must report any subsequent action on the order, such as a modification or a route to another venue, as outlined in Option 2.

Option 1:

Upon cancellation by the exchange, Broker 1 cancels the order on its books and records.

Industry Member Broker 1 is required to report:

- · The origination of the proprietary order (New Order event)
- · The route of the order to the exchange (Order Route event)
- · The cancellation of the order (Order Cancelled event)

#	Step	Reported Event	Comments
1	Broker 1 generates a proprietary order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234456 manualFlag: false deptType: T side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Broker 1 routes the order to the exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000	

#	Step	Reported Event	Comments
		orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.534456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: SESS-1 side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
3	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
4	Exch 1 cancels the order due to market conditions	*Exch 1 reports a Participant **Order Cancelled event***	
5	Broker 1 cancels the proprietary order	*Broker 1 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143036.534456 manualFlag: false cancelQty: 1000 leavesQty: 0 initiator: F	

Option 2:

Upon cancellation by the exchange, Broker 1 modifies the order on its books and records and routes the order to another venue.
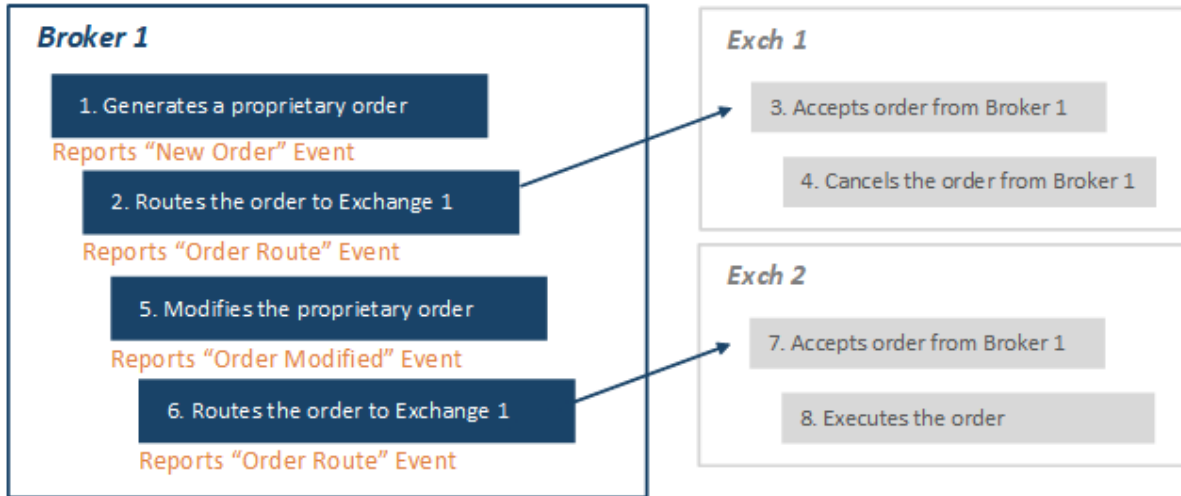
Industry Member Broker 1 is required to report:

- The origination of the proprietary order (New Order event)
- The route of the order to Exchange 1 (Order Route event)
- The modification of the proprietary order (Order Modified event)
- The route of the order to Exchange 2 (Order Route event)

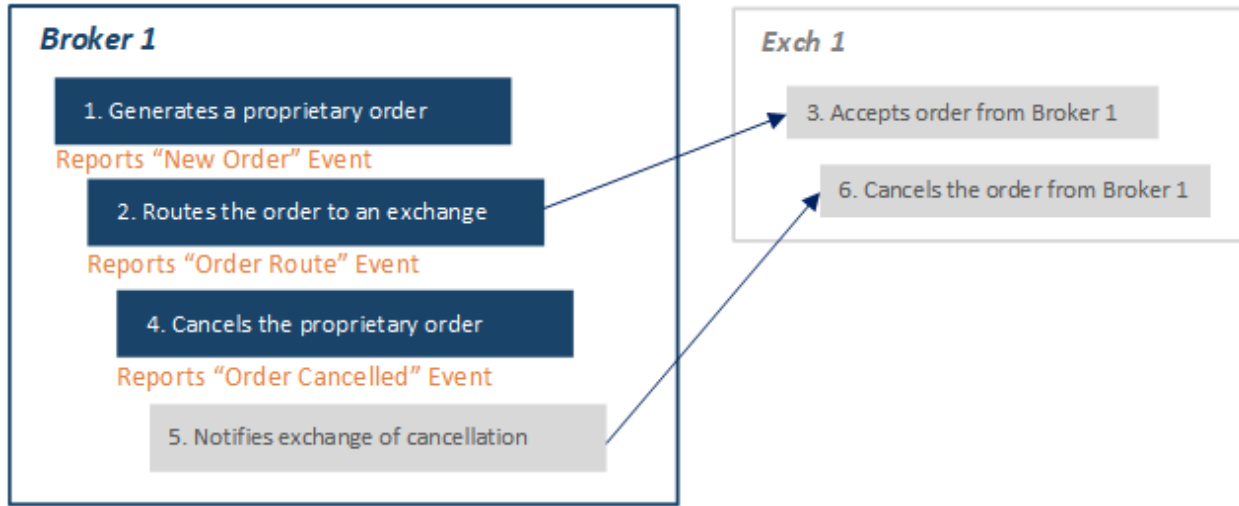| #	Step	Reported Event	Comments
1	Broker 1 generates a proprietary order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234456 manualFlag: false deptType: T side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Broker 1 routes the	*Broker 1 reports an **Order Route***	

#	Step	Reported Event	Comments
	order to Exchange 1	*event* type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.534456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: SESS-1 side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
3	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
4	Exch 1 cancels the order due to market conditions	*Exch 1 reports a Participant **Order Cancelled event***	
5	Broker 1 modifies the proprietary order	*Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: OM23456 symbol: XYZ priorOrderKeyDate: 20180417T000000 priorOrderID: O23456 eventTimestamp: 20180417T143036.234456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: F side: B	

#	Step	Reported Event	Comments
		price: 10.02 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY=20170417 tradingSession: REG custDspIntrFlag: false	
6	Broker 1 routes the order to Exchange 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143036.534456 manualFlag: false senderIMID: FRMA destination: EXCH2 destinationType: E routedOrderID: XYZO560 session: SESS-5 side: B price: 10.02 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
7	Exch 2 accepts the order from Broker 1	*Exch 2 reports a Participant **Order Accepted event***	
8	Exch 2 executes the order	*Exch 2 reports a Participant **Trade event***	

2.12.2. Industry Member Cancels a Proprietary Order that has Already Been Executed

This scenario illustrates the CAT reporting requirements when an Industry Member cancels a proprietary order that has already been executed. In this scenario, Industry Member Broker 1 generates a proprietary order and routes the order to Broker 2 for execution. Broker 1 subsequently cancels the order, but the order was executed several milliseconds before the cancellation was initiated by Broker 1.
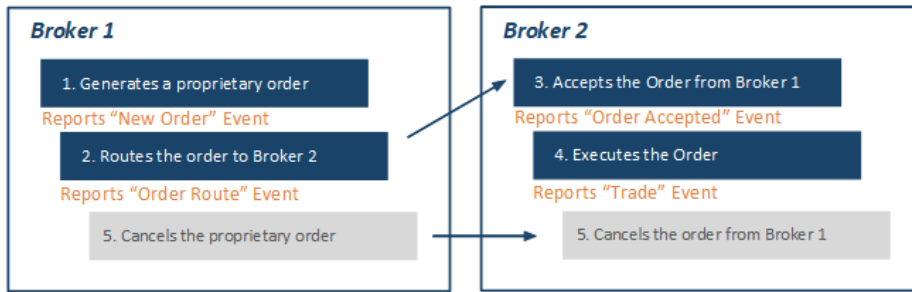
Industry Member Broker 1 is required to report:

- · The origination of the proprietary order (New Order event)
- · The route of the order to Broker 2 (Order Route event)

Industry Member Broker 2 is required to report:

- · The receipt of the order from Broker 1 (Order Accepted event)
- · The execution of Broker 1's order (Trade event)

Although Broker 1's cancellation instruction was originated after the execution of the order, Broker 1 and Broker 2 will be required to report an Order Cancelled event in Phase 2c. In accordance with CAT FAQ P14, if the cancellation of an order is received after it has been executed the Order Cancelled event will not be rejected by CAT. This guidance would also apply if Broker 1 routed the order to an exchange as opposed to another broker-dealer.

#	Step	Reported Event	Comments
1	Broker 1 originates a proprietary order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.234456 manualFlag: false deptType: T side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: P	

#	Step	Reported Event	Comments
		affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.534456 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: XYZO555 session: side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
3	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T143035.634456 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: false deptType: TA side: B price: 9.99 quantity: 1000	

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	
4	Broker 2 executes the order	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ124 symbol: XYZ eventTimestamp: 20180417T143037.234456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 9.99 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: O34567 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	The *buyDetails* reflect the details of customer order O34567. The *sellDetails* capture the FDID of the firm proprietary account from which the customer order was filled.
5	Broker 1 instructs Broker 2 to cancel the order several milliseconds after the order has been executed	*NA*	In Phase 2c, Broker 1 will be required to report an Order Cancelled event to CAT.
6	Broker 2 receives the cancellation instruction from Broker 1	*NA*	In Phase 2c, Broker 2 will be required to report an Order Cancelled event to CAT.

2.12.3. Industry Member Cancels a Proprietary Order Previously Routed to an Exchange

This scenario illustrates the CAT reporting requirements when an Industry Member cancels a proprietary order that was previously routed to an exchange for execution.

Industry Member Broker 1 is required to report:

· The origination of the proprietary order (New Order event)

· The route of the order to the exchange (Order Route event)

· The cancellation of the proprietary order (Order Cancelled event)

#	Step	Reported Event	Comments
1	Broker 1 generates a proprietary order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O56575 symbol: XYZ eventTimestamp: 20180417T150335.234456 manualFlag: false deptType: T side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP1234 accountHolderType: P	

#	Step	Reported Event	Comments
		affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Broker 1 routes the order to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O56575 symbol: XYZ eventTimestamp: 20180417T150335.464456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: RO56575XYZ session: SESS1 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
3	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
4	Broker 1 cancels the proprietary order	*Broker 1 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180417T000000 orderID: O56575 symbol: XYZ eventTimestamp: 20180417T150345.123456 manualFlag: false cancelQty: 1000 leavesQty: 0 initiator: F	
5	Broker 1 notifies the exchange that the order was cancelled	*NA*	

#	Step	Reported Event	Comments
6	The exchange cancels the order per the firm's instruction	*Exchange 1 reports a Participant **Order Cancelled event***	

2.13. Clearing Firm Scenarios

This section illustrates the CAT reporting requirements for orders handled in a Clearing Firm's system.

2.13.1. Order Routed and Executed via a Clearing Firm

This example illustrates the CAT reporting requirements when an introducing firm enters a customer order into a clearing firm's system, and the clearing firm executes the order from a proprietary account. Both the introducing firm and clearing firm are Industry Members.

Introducing Firm Broker 1 is required to report:

- · The receipt of the customer order (New Order event)
- · The route of the order to the clearing firm (Order Route event)

The Clearing Firm is required to report:

- · The receipt of the order from Broker 1 (Order Accepted event)
- · The execution of the order (Trade event)

#	Step	Reported Event	Comments
1	Customer sends the order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B	

#	Step	Reported Event	Comments
		price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: A8B7C6 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to the clearing firm	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.334456 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: RT23456 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
4	The clearing firm accepts the order from Broker 1	*Clearing firm reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O3A1B2C symbol: XYZ eventTimestamp: 20180417T153036.334456 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F	

#	Step	Reported Event	Comments
		routedOrderID: RT23456 affiliateFlag: false deptType: T side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	The clearing firm executes the order	*Clearing firm reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TO3A1B2C symbol: XYZ eventTimestamp: 20180417T153037.534456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 10.00 capacity: P tapeTradeID: TRFAO556 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: O3A1B2C Side: B sellDetails: Side: SL firmDesignatedID: PROPF accountHolderType: PO	The *buyDetails* reflect the details of customer order O3A1B2C. The *sellDetails* capture the FDID of the firm proprietary account from which the customer order was filled.

2.13.2. Direct Order Routing via a Clearing Firm's System

This scenario illustrates the CAT reporting requirement when an introducing firm receives a customer order and, using its clearing firm's system, directs the order to an exchange for execution. The clearing firm does not participate in any order routing or handling instructions, but only provides the technology to the introducing firm to route the order.

Introducing Firm Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The route of the order to Exchange 1 (Order Route event)

The clearing firm does not have CAT reporting obligations in this scenario. The exchange follows CAT reporting guidelines as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the order from the customer	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: 4e3f2g1h accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Through the clearing firm's system, Broker 1 enters and directs the order to Exchange 1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T0000000 orderID: O23456	

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180417T153036.234456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: RT23456 session: s2 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
4	Exchange 1 accepts the order from Broker 1	*Exchange 1 reports a Participant **Order Accepted event***	

2.13.3. Order Routing via an Algorithm Provided by the Clearing Firm

This scenario illustrates the CAT reporting requirements when an introducing firm receives a customer order and enters it into a clearing firm's system. The clearing firm's system automatically determines the routing destination based on pre-defined criteria developed by the clearing firm. The clearing firm makes the determination as to where the order is routed. The introducing firm does not direct the order. Both the introducing firm and the clearing firm are Industry Members.

Introducing Firm Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The route of the order to the clearing firm (Order Route event)

The Clearing Firm is required to report:

- The receipt for the order from the introducing firm (Order Accepted event)
- The route of the order to Exchange 1 (Order Route event)

The exchange follows CAT reporting guidelines as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1, as the introducing firm, accepts the order from the customer	*Broker 1 (IMID = FRMA) reports a* **New Order even**t type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: FDID2222 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 enters the order into the clearing firm's system	*Broker 1 reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.334456 manualFlag: false	

#	Step	Reported Event	Comments
		senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: RT23456 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
4	The clearing firm accepts the order routed from Broker 1	*Clearing firm (FRMB) reports an* **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000 orderID: O3A1B2C symbol: XYZ eventTimestamp: 20180417T153036.334456 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: RT23456 affiliateFlag: false deptType: T side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: ALG custDspIntrFlag: false	
5	The clearing firm's system algorithm determines to route the order out to Exchange 1	*Clearing firm (FRMB) reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O3A1B2C symbol: XYZ eventTimestamp: 20180417T153038.334456	

#	Step	Reported Event	Comments
		manualFlag: false senderIMID: FRMB destination: EXCH1 destinationType: E routedOrderID: BEO34567 session: EA:16 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
6	Exchange 1 receives the order from clearing firm	*Exchange 1 (EXCH1) reports the Participant **Order Accepted event***	

2.14. ~~NYSE Floor Broker Scenarios~~Fractional Share Scenarios

~~This section illustrates the CAT reporting requirements for NYSE Floor Brokers.~~

~~2.14.1. Order Routed to a Floor Broker Within the Same Broker-Dealer~~

~~This scenario illustrates the CAT reporting requirements when an Industry Member receives a customer order, and further routes the customer order to a floor broker within the same broker-dealer that uses a separate IMID. While both parties belong to the same Industry Member, Broker 1 maintains a separate IMID for its upstairs desk and its floor broker. Upon receipt of the order, the floor broker further routes the order to the exchange for execution.~~

~~Industry Member Broker 1's upstairs desk (FRMA) is required to report:~~

- The receipt of the order from the customer (New Order event)
- The route of the order to its floor broker (Order Route event)

Industry Member Broker 1's floor broker (FBKA) is required to report:

- The receipt of the order from Broker 1's upstairs desk (Order Accepted event)
- The route of the order to the exchange (Order Route event)

Since Broker 1 maintains separate IMIDs for its floor broker and its upstairs desk, Broker 1 is required to report an MEOR reflecting a route to the floor broker, not an MEIR. Refer to CAT FAQ L1 for additional information on equity floor broker reporting.

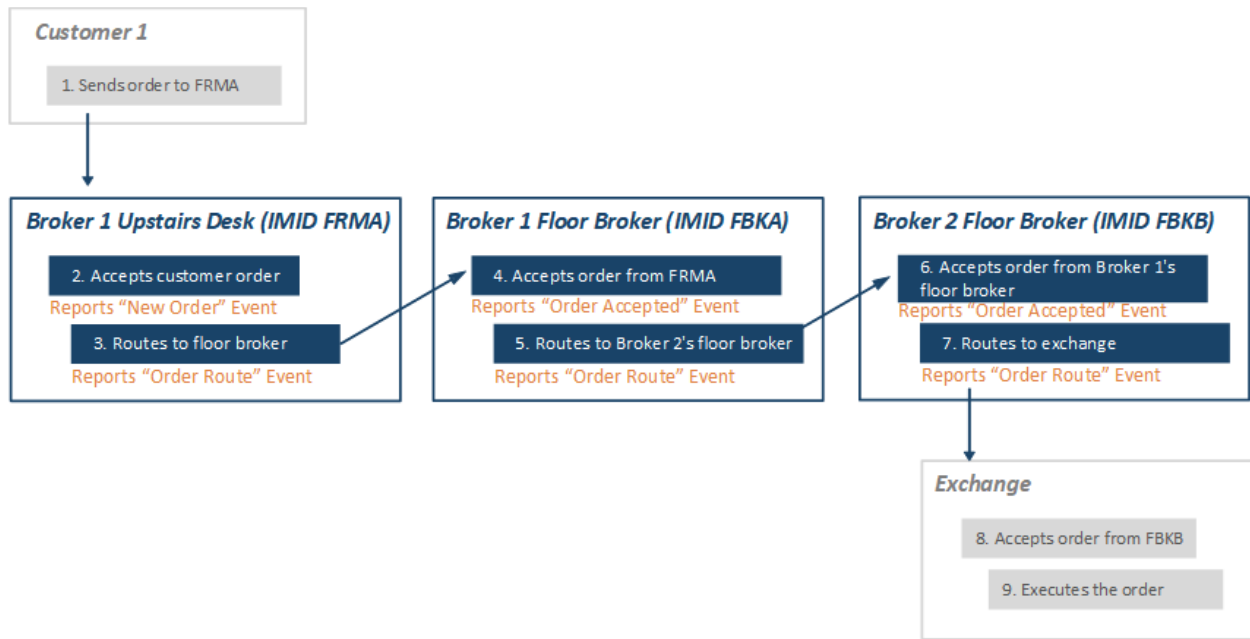| #	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	NA	
2	Broker 1 accepts the customer order at IMID FRMA	Broker 1's upstairs desk (IMID=FRMA) reports a **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	FRMA routes the order to the floor broker FBKA	FRMA reports an **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp:	In this scenario, the *destination* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When routing an order to another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.

#	Step	Reported Event	Comments
		20180417T153035.234556 manualFlag: false senderIMID: FRMA destination: F1 destinationType: F routedOrderID: XYZO555 session: side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: true isoInd: NA handlingInstructions:	
4	Floor broker accepts the order from FRMA	*Broker 1's Floor Broker (IMID=FBKA) reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.534556 manualFlag: false receiverIMID: F1 senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: true deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	In this scenario, the *receiverIMID* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When receiving an order from another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.
5	Floor broker routes the order to the exchange	*FBKA reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order.

#	Step	Reported Event	Comments
		orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153036.534556 manualFlag: false senderIMID: BDG1234 destination: EXCH1 destinationType: E routedOrderID: XYZO560 session: Es6:AA side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
6	The Exchange accepts the order from the floor broker	*EXCH1 reports a Participant **Order Accepted event***	
7	The Exchange executes the order	*EXCH1 reports a Participant **Trade event***	

2.14.2. Order Routed to a Floor Broker at Another Broker-Dealer

This scenario illustrates the CAT reporting requirements when an Industry Member receives a customer order, and further routes the customer order to a floor broker at another broker-dealer. Upon receipt of the order, the floor broker further routes the order to the exchange for execution.

Industry Member Broker 1's upstairs desk (FRMA) is required to report:

- The receipt of the order from the customer (New Order event)
- The route of the order to Broker 2's floor broker (Order Route event)

Industry Member Broker 2's floor broker (FBKB) is required to report:

- The receipt of the order from Broker 1's upstairs desk (Order Accepted event)
- The route of the order to the exchange (Order Route event)

Refer to CAT FAQ L1 for additional information on equity floor broker reporting.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	NA	
2	Broker 1 accepts the customer order at IMID FRMA	Broker 1's upstairs desk (IMID=FRMA) reports a **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	FRMA routes the order to Broker 2's floor broker FBKB	FRMA reports an **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234556 manualFlag: false senderIMID: FRMA	In this scenario, the *destination* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When routing an order to another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.

#	Step	Reported Event	Comments
		destination: F2	
		destinationType: F	
		routedOrderID: XYZO555	
		session:	
		side: B	
		price: 10.00	
		quantity: 5000	
		orderType: LMT	
		timeInForce: DAY=20180417	
		tradingSession: REG	
		affiliateFlag: true	
		isoInd: NA	
		handlingInstructions:	
4	Broker 2's floor broker accepts the order from FRMA	Broker 2's Floor Broker (IMID=FBKB) reports an **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.534556 manualFlag: false receiverIMID: F2 senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: true deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	In this scenario, the *receiverIMID* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When receiving an order from another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.
5	Broker 2's floor broker routes the order to the exchange	FBKB reports an **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp:	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order.

#	Step	Reported Event	Comments
		20180417T153036.534556 manualFlag: false senderIMID: BDG3456 destination: EXCH1 destinationType: E routedOrderID: XYZO560 session: Es6:AA side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
6	The Exchange accepts the order from the floor broker	*EXCH1 reports a Participant **Order Accepted** event*	
7	The Exchange executes the order	*EXCH1 reports a Participant **Trade** event*	

2.14.3. Floor Broker Routes an Order to a Floor Broker at Another Broker-Dealer

This scenario illustrates the CAT reporting requirements when a floor broker routes an order to a floor broker at another Broker-Dealer. In this scenario, Industry Member Broker 1 receives a customer order, and further routes the customer order to a floor broker within the same broker-dealer that uses a separate IMID. Upon receipt of the order, the floor broker routes the order to Industry Member Broker 2's floor broker. Industry Member Broker 2's floor broker routes the order to the exchange for execution.

Customer 1

1. Sends order to FRMA

Broker 1 Upstairs Desk (IMID FRMA)

2. Accepts customer order
Reports "New Order" Event

3. Routes to floor broker
Reports "Order Route" Event

Broker 1 Floor Broker (IMID FBKA)

4. Accepts order from FRMA
Reports "Order Accepted" Event

5. Routes to Broker 2's floor broker
Reports "Order Route" Event

Broker 2 Floor Broker (IMID FBKB)

6. Accepts order from Broker 1's floor broker
Reports "Order Accepted" Event

7. Routes to exchange
Reports "Order Route" Event

Exchange

8. Accepts order from FBKB

9. Executes the order

Industry Member Broker 1's upstairs desk (FRMA) is required to report:

- The receipt of the order from the customer (New Order event)
- The route of the order to its floor broker (Order Route event)

Industry Member Broker 1's floor broker (FBKA) is required to report:

- The receipt of the order from Broker 1's upstairs desk (Order Accepted event)
- The route of the order to Broker 2's floor broker (Order Route event)

Industry Member Broker 2's floor broker (FBKB) is required to report:

- The receipt of the order from Broker 1 (Order Accepted event)
- The route of the order to the exchange (Order Route event)

Refer to CAT FAQ L1 for additional information on equity floor broker reporting.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	N/A	
2	Broker 1 accepts the customer order at IMID FRMA	Broker 1's upstairs desk (IMID=FRMA) reports a **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456	

#	Step	Reported Event	Comments
		manualFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	FRMA routes the order to its floor broker FBKA	*FRMA reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234556 manualFlag: false senderIMID: FRMA destination: F1 destinationType: F routedOrderID: XYZO555 session: side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: true isoInd: NA handlingInstructions:	In this scenario, the *destination* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When routing an order to another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.
4	Broker 1's floor broker accepts the order from FRMA	*Broker 1's Floor Broker (IMID=FBKA) reports an* **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ	In this scenario, the *receiverIMID* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When receiving an order from another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.

#	Step	Reported Event	Comments
		eventTimestamp: 20180417T153035.534556 manualFlag: false receiverIMID: F1 senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: true deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: custDspIntrFlag: false	
5	Broker 1's floor broker routes the order to Broker 2's floor broker	*FBKA reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.734556 manualFlag: false senderIMID: F1 destination: BDG3456 destinationType: F routedOrderID: XYZO560 session: side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	In this scenario, the *senderIMID* represents the entering firm mnemonic of the floor broker routing the order. The *destination* represents the badge number of the floor broker routing the order.
6	Broker 2's floor broker accepts the order from Broker 1's floor broker	*Broker 2's Floor Broker (IMID=FBKB) reports an **Order Accepted event***	In this scenario, the *destination* represents the entering firm mnemonic of the floor broker routing the order.

#	Step	Reported Event	Comments
		type: MEOA orderKeyDate: 20180417T000000 orderID: O9999 symbol: XYZ eventTimestamp: 20180417T153035.934556 manualFlag: false receiverIMID: BDG3456 senderIMID: F1 senderType: F routedOrderID: XYZO560 affiliateFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: custDspIntrFlag: false	The *receiverIMID* represents the badge number of the floor broker routing the order.
7	Broker 2's floor broker routes the order to the exchange	*FBKB reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O9999 symbol: XYZ eventTimestamp: 20180417T153036.434556 manualFlag: false senderIMID: BDG3456 destination: EXCH1 destinationType: E routedOrderID: XYZO575 session: Es6:AA side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order.

#	Step	Reported Event	Comments
8	The Exchange accepts the order from the floor broker	*EXCH1 reports a Participant **Order Accepted** event*	
9	The Exchange executes the order	*EXCH1 reports a Participant **Trade** event*	

2.14.4. Floor Broker Routes an Order to an Exchange Operated Algorithm

This scenario illustrates the CAT reporting requirements when a floor broker receives an order and routes the order to an exchange operated algorithm. In this scenario, Industry Member Broker 1 receives a customer order, and further routes the customer order to a floor broker within the same broker-dealer that uses a separate IMID.

Upon receipt of the order, the floor broker further routes the order to an exchange operated algorithm. The algorithm routes the order to the exchange for execution. The exchange operated algorithm is considered to be a separate department or desk of Broker 1's floor broker for the purposes of reporting to CAT.

Industry Member Broker 1's upstairs desk (FRMA) is required to report:

- The receipt of the order from the customer (New Order event)
- The route of the order to its floor broker (Order Route event)

Industry Member Broker 1's floor broker (FBKA) is required to report:

- The receipt of the order from Broker 1's upstairs desk (Order Accepted event)
- The internal route of the order to the exchange operated algorithm (Order Internal Route Accepted event)

- The route of the order to the exchange (Order Route event)

The floor broker's route to the exchange operated algorithm is required to be reported as an MEIR event with a *handlingInstructions* value of "FBA". Refer to CAT FAQ L1 for additional information on equity floor broker reporting.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the customer order at IMID FRMA	*Broker 1's upstairs desk (IMID=FRMA) reports a* **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	FRMA routes the order to its floor broker FBKA	*FRMA reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234556 manualFlag: false senderIMID: FRMA destination: F1 destinationType: F routedOrderID: XYZO555 session:	In this scenario, the *destination* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When routing an order to another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.

#	Step	Reported Event	Comments
		side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: true isoInd: NA handlingInstructions:	
4	Floor broker receives the order from FRMA	Broker 1's Floor Broker (IMID=FBKA) reports an **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.534556 manualFlag: false receiverIMID: F1 senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: true deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: custDspIntrFlag: false	In this scenario, the *receiverIMID* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When receiving an order from another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.
5	Floor broker routes the order to an exchange operated algorithm	FBKA reports an **Order Internal Route Accepted event** type: MEIR orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ parentOrderKeyDate: parentOrderID: eventTimestamp: 20180417T153035.534556	When the order is internally routed, a new Order Key is not assigned, and the Parent Order Key fields must remain blank. In this scenario, the *infoBarrierID* is populated with the Badge Number of the floor broker routing the order. A *handlingInstructions* value of FBA is required on the MEIR event.

#	Step	Reported Event	Comments
		manualFlag: false deptType: A receivingDeskType: FB infoBarrierID: BDG1234 side: B price: 10.00 quantity: 5000 orderType: LMT handlingInstructions: FBA timeInForce: DAY=20180417 tradingSession: REG	
6	FBKA routes the order to the exchange using the exchange operated algo	*FBKA reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153036.534556 manualFlag: false senderIMID: BDG1234 destination: EXCH1 destinationType: E routedOrderID: XYZO560 session: Es6:AA side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order. In phase 2c, a *handlingInstructions* value of FBA will be required on the MEOR event.
7	The Exchange accepts the order from the floor broker	*EXCH1 reports a Participant **Order Accepted event***	
8	The Exchange executes the order	*EXCH1 reports a Participant **Trade event***	

~~2.14.5. Floor Broker Routes an Order to an Algorithm Operated by Another Broker-Dealer~~

~~This scenario illustrates the CAT reporting requirements when a floor broker receives an order and routes the order to a third party algorithm operated by another broker-dealer. In this scenario, Industry Member Broker 1 receives a customer order, and further routes the customer order to a floor broker within the same broker-dealer that uses a separate IMID.~~

~~Upon receipt of the order, the floor broker routes the order to a third party algorithm operated by another broker-dealer. The third party algorithm, which is operated by a registered broker-dealer, routes part of the order to the NYSE for execution and the rest of the order to an away exchange.~~

Customer 1

1. Sends order to FRMA

Broker 1 Upstairs Desk (IMID FRMA)

2. Accepts customer order
Reports "New Order" Event

3. Routes to floor broker
Reports "Order Route" Event

Broker 1 Floor Broker (IMID FBKA)

4. Accepts order from FRMA
Reports "Order Accepted" Event

5. Routes to third party algo
Reports "Order Route" Event

Broker 2 Algo (IMID BDAP)

6. Accepts order from Broker 1's floor broker
Reports "Order Accepted" Event

7. Routes portion to NYSE
Reports "Order Route" Event

10. Routes portion to away market
Reports "Order Route" Event

NYSE

8. Accepts order from BDAP

9. Executes the order

Exchange 2

11. Accepts order from BDAP

12. Executes the order

~~Industry Member Broker 1's upstairs desk (FRMA) is required to report:~~

- ~~The receipt of the order from the customer (New Order event)~~
- ~~The route of the order to its floor broker (Order Route event)~~

~~Industry Member Broker 1's floor broker (FBKA) is required to report:~~

- ~~The receipt of the order from Broker 1's upstairs desk (Order Accepted event)~~
- ~~The route of the order to the third party algorithm (Order Route event)~~

~~The broker-dealer operating the algorithm is required to report:~~

- ~~The receipt of the order (Order Accepted event)~~
- ~~The partial route of the order to NYSE (Order Route event)~~
- ~~The partial route of the order to an away market (Order Route event)~~

In this scenario, the reporting requirements for the third party algorithm are the same if algorithm is acting as a broker-dealer or acting solely as a technology provider. Refer to CAT FAQ L1 for additional information on equity floor broker reporting.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	NA	
2	Broker 1 accepts the customer order at IMID FRMA	Broker 1's upstairs desk (IMID=FRMA) reports a **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	FRMA routes the order to its floor broker FBKA	FRMA reports an **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234556 manualFlag: false senderIMID: FRMA destination: F1 destinationType: F routedOrderID: XYZO555 session: side: B	In this scenario, the *destination* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number When routing an order to another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.

#	Step	Reported Event	Comments
		price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: true isoInd: NA handlingInstructions:	
4	Floor broker receives the order from FRMA	Broker 1's Floor Broker (IMID=FBKA) reports an **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.534556 manualFlag: false receiverIMID: F1 senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: true deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: custDspIntrFlag: false	In this scenario, the *receiverIMID* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When routing an order to another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.
5	Floor broker routes the order to a third party algorithm operated by a broker-dealer	FBKA reports an **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.734556 manualFlag: false senderIMID: BDG1234 destination: BDAP	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order. In phase 2c, a *handlingInstructions* value of FBA will be required on the MEOR event.

#	Step	Reported Event	Comments
		destinationType: F routedOrderID: XYZO560 session: side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
6	The Industry Member operating the algo accepts the order from FBKA	*Broker-Dealer Algo Provider (IMID=BDAP) reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O56789 symbol: XYZ eventTimestamp: 20180417T153035.934556 manualFlag: false receiverIMID: BDAP senderIMID: BDG1234 senderType: F routedOrderID: XYZO560 affiliateFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: FBA custDspIntrFlag: false	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order. A *handlingInstructions* value of FBA is required.
7	BDAP partially routes the order to NYSE	*BDAP reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O56789 symbol: XYZ eventTimestamp:	In phase 2c, a *handlingInstructions* value of FBA will be required on the MEOR event.

#	Step	Reported Event	Comments
		20180417T153036.434556 manualFlag: false senderIMID: BDAP destination: NYSE destinationType: E routedOrderID: XYZO570 session: Es6:AA side: B price: 10.00 quantity: 3000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
8	NYSE accepts the order from the floor broker	*NYSE reports a Participant **Order Accepted event***	
9	NYSE executes the order	*NYSE reports a Participant **Trade event***	
10	BDAP partially routes the order to an away market	*BDAP reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O56789 symbol: XYZ eventTimestamp: 20180417T153036.434556 manualFlag: false senderIMID: BDAP destination: EXCH1 destinationType: E routedOrderID: XYZO575 session: Es6:AA side: B price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	In phase 2c, a *handlingInstructions* value of FBA will be required on the MEOR event.

#	Step	Reported Event	Comments
~~11~~	~~The exchange accepts the order from the floor broker~~	~~EXCH1 reports a Participant *Order Accepted event*~~	
~~12~~	~~The exchange executes the order~~	~~EXCH1 reports a Participant *Trade event*~~	

This section illustrates the CAT reporting requirements for liquidating a fractional share from a customer or client account. These scenarios can be applied to full liquidation of a position that includes fractional shares, an ACAT request or dividend reinvestment after liquidation.

2.14.1. Industry Member Liquidates Customer Position by Routing Away the Whole Share Quantity and Internalizing the Fractional Share

This scenario illustrates the CAT reporting requirements when a customer or client requests that an Industry Member liquidate an entire position which includes a fractional share. The Industry Member routes the whole share portion of the order to an exchange for execution and executes the fractional share against its own proprietary account.

Industry Member Broker 1 is required to report:

· The receipt of the customer order (New Order event)

· The route of the whole share quantity to the exchange (Order Route event)

· The execution of the fractional share against its proprietary account (Trade event)

#	Step	Reported Event	Comments
1	Customer sends an instruction to Broker 1 to liquidate its position	*NA*	
2	Broker 1 accepts the customer instruction and generates an order to liquidate the position	Broker 1 reports a *New Order event* type: MENO orderKeyDate: 20180416T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180416T153035.234456	Since the customer requested full liquidation of the position, Broker 1 is required to report the full *quantity* of 100.5 shares.

#	Step	Reported Event	Comments
		manualFlag: false deptType: T side: SL price: quantity: 100.5 orderType: MKT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the whole share quantity to the exchange	Broker 1 (IMID = FRMA) reports an *Order Route event* type: MEOR orderKeyDate: 20180416T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180416T153035.334466 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: s5 side: SL price: quantity: 100 orderType: MKT timeInForce: DAY=20180416 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	Since Broker 1 is routing to a national securities exchange, *session* must be populated.
4	The Exchange accepts the order from Broker 1	EXCH1 reports a Participant *Order Accepted event*	
5	The Exchange executes the whole share quantity at 25.00 per share	EXCH1 reports a Participant *Trade event*	
6	Broker 1 executes the fractional share against its own proprietary	Broker 1 reports a *Trade event* type: MEOT	The *buyDetails* capture the FDID of the firm proprietary account from which the customer order was filled.

#	Step	Reported Event	Comments
	account	tradeKeyDate: 20180416T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180416T153035.434466 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 0.5 price: 25.00 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: side: B firmDesignatedID: FRAC123 accountHolderType: P sellDetails: orderKeyDate: 20180416T000000 orderID: O12345 side: SL	The *sellDetails* reflect the details of customer order O12345.

2.14.2. Introducing Firm Routes the Position to the Clearing Firm

This scenario illustrates the CAT reporting requirements when a customer or client requests that an Industry Member introducing firm liquidate an entire position which includes a fractional share. The introducing firm routes the entire position to the clearing firm and the clearing firm routes the whole share portion to another Industry Member and executes the fractional share against its own proprietary account.

Introducing Firm Broker 1 is required to report:

· The receipt of the customer order (New Order event)

· The route of the order to the clearing firm (Order Route event)

Clearing Firm Broker 2 is required to report:

· The receipt of the order from Introducing Firm Broker 1 (Order Accepted event)

· The route of the whole share quantity to Broker 3 (Order Route event)

· The execution of the fractional share quantity (Trade event)

Broker 3 is required to report:

· The receipt of the whole share order from the Clearing Firm Broker 2 (Order Accepted event)

· The execution of the whole share order (Trade event)

#	Step	Reported Event	Comments
1	Customer sends an instruction to introducing firm Broker 1 to liquidate its position	*NA*	
2	Introducing firm Broker 1 accepts the customer instruction and generates an order to liquidate the position	Introducing firm Broker 1 reports a ***New Order event*** type: MENO orderKeyDate: 20180416T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180416T153035.234456 manualFlag: false deptType: A side: SL price: quantity: 100.5 orderType: MKT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Since the customer requested full liquidation of the position, Broker 1 is required to report the full *quantity* of 100.5 shares.
3	Introducing firm Broker 1 routes the order to the clearing firm Broker 2	Introducing firm Broker 1 reports an ***Order Route event*** type: MEOR orderKeyDate: 20180416T000000 orderID: O12345	

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180416T153035.334466 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: XYZO555 side: SL price: quantity: 100.5 orderType: MKT timeInForce: DAY=20180416 tradingSession: REG affiliateFlag: false isoInd: NA	
4	The clearing firm Broker 2 accepts the order routed from introducing firm Broker 1	Clearing firm Broker 2 reports an ***Order Accepted event*** type: MEOA orderKeyDate: 20180416T000000 orderID: 9876XYZ symbol: XYZ eventTimestamp: 20180416T153035.444467 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: false deptType: T side: SL price: quantity: 100.5 orderType: MKT timeInForce: DAY=20180416 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	The clearing firm Broker 2 routes the whole share quantity to Broker 3	Clearing firm Broker 2 reports an ***Order Route event*** type: MEOR orderKeyDate: 20180416T000000 orderID: 9876XYZ	

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180416T153035.554466 manualFlag: false senderIMID: FRMB destination: FRMC destinationType: F routedOrderID: 41619XYZ side: SL price: quantity: 100 orderType: MKT timeInForce: DAY=20180416 tradingSession: REG affiliateFlag: false isoInd: NA	
6	Broker 3 accepts the order routed from the clearing firm Broker 2	Broker 3 reports an *Order Accepted event* type: MEOA orderKeyDate: 20180416T000000 orderID: O3A1B2C symbol: XYZ eventTimestamp: 20180416T153035.674467 manualFlag: false receiverIMID: FRMC senderIMID: FRMB senderType: F routedOrderID: 41619XYZ affiliateFlag: false deptType: T side: SL price: quantity: 100 orderType: MKT timeInForce: DAY=20180416 tradingSession: REG isoInd: NA custDspIntrFlag: false	
7	Broker 3 executes the order	Broker 3 reports a *Trade event* type: MEOT tradeKeyDate: 20180416T000000	The *buyDetails* capture the FDID of the firm proprietary account from which the customer order was filled. The *sellDetails* reflect the details of customer order O3A1B2C.

#	Step	Reported Event	Comments
		tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180416T153035.764468 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 100 price: 25.00 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: side: B firmDesignatedID: PROP123 accountHolderType: P sellDetails: orderKeyDate: 20180416T000000 orderID: O3A1B2C side: SL	
8	The clearing firm Broker 2 executes the fractional share principally at 25.00 per share	Clearing firm Broker 2 reports a ***Trade event*** type: MEOT tradeKeyDate: 20180416T000000 tradeID: TXYZ0416189 symbol: XYZ eventTimestamp: 20180416T153035.894468 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 0.5 price: 25.00 capacity: P tapeTradeID: XYZ987 marketCenterID: DN sideDetailsInd: NA buyDetails: side: B firmDesignatedID: FRAC123 accountHolderType: P sellDetails: orderKeyDate: 20180416T000000	The *buyDetails* capture the FDID of the firm proprietary account from which the customer order was filled. The *sellDetails* reflect the details of customer order 9876XYZ.

#	Step	Reported Event	Comments
		orderID: 9876XYZ side: SL	

2.14.3. Introducing Firm Routes the Whole Share Quantity to Another Industry Member and Routes the Fractional Share to the Clearing Firm

This scenario illustrates the CAT reporting requirements when a customer or client requests that an Industry Member introducing firm liquidate an entire position which includes a fractional share. The customer order is entered into the clearing firm's system but the clearing firm does not participate in any order routing or handling instructions for the whole share portion of the order. The introducing firm routes the whole share portion of the order to another Industry Member and the fractional share portion to the Industry Member clearing firm.
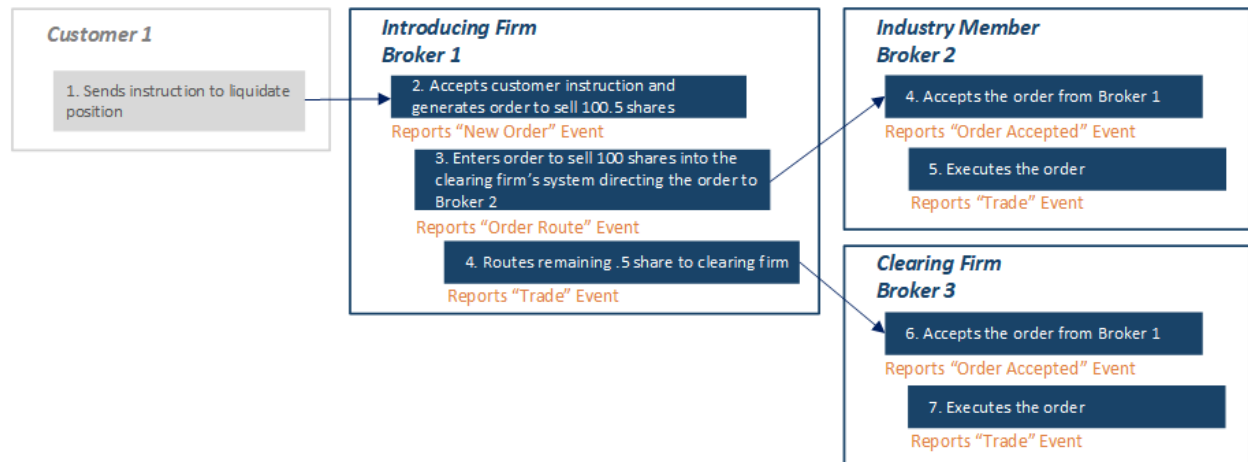
Introducing Firm Broker 1 is required to report:

· The receipt of the customer order (New Order event)
· The route of the whole share quantity to Broker 2 (Order Route event)
· The route of the fractional share quantity to Clearing Firm Broker 3 (Order Route event)

Industry Member Broker 2 is required to report:

· The receipt of the whole share order from Introducing Firm Broker 1 (Order Accepted event)
· The execution of the whole share order (Trade event)

Clearing Firm Broker 3 is required to report:

· The receipt of the fractional share order from Broker 1 (Order Accepted event)
· The execution of the fractional share order (Trade event)

#	Step	Reported Event	Comments
1	Customer sends an instruction to introducing firm Broker 1 to liquidate its position	*NA*	
2	Introducing firm Broker 1 accepts the customer instruction and generates an order to liquidate the position	Introducing firm Broker 1 reports a *New Order event* type: MENO orderKeyDate: 20180416T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180416T153035.234456 manualFlag: false deptType: A side: SL price: quantity: 100.5 orderType: MKT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Since the customer requested full liquidation of the position, Broker 1 is required to report the full *quantity* of 100.5 shares.
3	Introducing firm Broker 1 routes the whole share quantity to Industry Member Broker 2	Introducing firm Broker 1 reports an *Order Route event* type: MEOR orderKeyDate: 20180416T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180416T153035.334466 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: XYZO555 side: SL price: quantity: 100 orderType: MKT timeInForce: DAY=20180416 tradingSession: REG affiliateFlag: false	

#	Step	Reported Event	Comments
		isoInd: NA	
4	Industry Member Broker 2 accepts the order routed from introducing firm Broker 1	Industry Member Broker 2 reports an ***Order Accepted event*** type: MEOA orderKeyDate: 20180416T000000 orderID: 9876XYZ symbol: XYZ eventTimestamp: 20180416T153035.444467 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: false deptType: T side: SL price: quantity: 100 orderType: MKT timeInForce: DAY=20180416 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Industry Member Broker 2 executes the whole share order principally at 25.00 per share	Industry Member Broker 2 reports a ***Trade event*** type: MEOT tradeKeyDate: 20180416T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180416T153035.534468 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 100 price: 25.00 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: side: B	The *buyDetails* capture the FDID of the firm proprietary account from which the customer order was filled. The *sellDetails* reflect the details of customer order 9876XYZ.

#	Step	Reported Event	Comments

		firmDesignatedID: PROP123
		accountHolderType: P
		sellDetails:
		    orderKeyDate:
		    20180416T000000
		    orderID: 9876XYZ
		    side: SL	

6	Introducing firm Broker 1 routes the fractional share quantity to the clearing firm Broker 3	Introducing firm Broker 1 reports an ***Order Route event*** type: MEOR orderKeyDate: 20180416T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180416T153035.634466 manualFlag: false senderIMID: FRMA destination: FRMC destinationType: F routedOrderID: XYZO556 side: SL price: quantity: 0.5 orderType: MKT timeInForce: DAY=20180416 tradingSession: REG affiliateFlag: false isoInd: NA	
7	The clearing firm Broker 3 accepts the order routed from introducing firm Broker 1	Clearing firm Broker 3 reports an ***Order Accepted event*** type: MEOA orderKeyDate: 20180416T000000 orderID: O3A1B2C symbol: XYZ eventTimestamp: 20180416T153035.734467 manualFlag: false receiverIMID: FRMC senderIMID: FRMA senderType: F routedOrderID: XYZO556 affiliateFlag: false deptType: T	

#	Step	Reported Event	Comments
		side: SL price: quantity: 0.5 orderType: MKT timeInForce: DAY=20180416 tradingSession: REG isoInd: NA custDspIntrFlag: false	
8	The clearing firm Broker 3 executes the fractional share against its own proprietary account	Clearing firm Broker 3 reports a ***Trade event*** type: MEOT tradeKeyDate: 20180416T000000 tradeID: TXYZ0416189 symbol: XYZ eventTimestamp: 20180416T153035.834468 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 0.5 price: 25.05 capacity: P tapeTradeID: XYZ987 marketCenterID: DN sideDetailsInd: NA buyDetails: side: B firmDesignatedID: FRAC123 accountHolderType: P sellDetails: orderKeyDate: 20180416T000000 orderID: O3A1B2C side: SL	The *buyDetails* capture the FDID of the firm proprietary account from which the customer order was filled. The *sellDetails* reflect the details of customer order O3A1B2C.

2.14.4. Clearing Firm Liquidates a Fractional Share after an ACAT or Account Closure Request

This scenario illustrates the CAT reporting requirements when an Industry Member clearing firm liquidates a fractional share that remained in a customer's account after processing an ACAT request. This scenario would similarly apply if an Industry Member clearing firm liquidates a fractional share received in a customer or client account due to an automatic reinvestment plan after the account was closed. The

Industry Member clearing firm's system automatically creates an order based on receipt of the ACAT request and executes the fractional share against its own proprietary account.

Clearing Firm Broker 1 is required to report:

· The creation of the fractional share order (New Order event)

· The execution of the fractional share against its proprietary account (Trade event)

#	Step	Reported Event	Comments
1	Broker 1's system creates an order to internalize the fractional share at the previous trading day's closing price of 25.00 per share	Broker 1 reports a **New Order event** type: MENO orderKeyDate: 20180416T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180416T080000.000456 manualFlag: false deptType: T side: SL price: 25.00 quantity: 0.5 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	The *eventTimestamp* is the time that the Industry Member's system created the order.
2	Broker 1 executes the fractional share against its own proprietary account	Broker 1 reports a **Trade event** type: MEOT tradeKeyDate: 20180416T000000 tradeID: TXYZ555 symbol: XYZ	The *buyDetails* capture the FDID of the firm proprietary account from which the customer order was filled. The *sellDetails* reflect the details of customer order O12345.

#	Step	Reported Event	Comments

		eventTimestamp: 20180416T093000.400456
		manualFlag: false
		cancelFlag: false
		cancelTimestamp:
		quantity: 0.5
		price: 25.00
		capacity: P
		tapeTradeID: TRF123
		marketCenterID: DN
		sideDetailsInd: NA
		buyDetails:
		    side: B
		    firmDesignatedID: FRAC123
		    accountHolderType: P
		sellDetails:
		    orderKeyDate: 20180416T000000
		    orderID: O12345
		    side: SL	

2.14.5. Dividend Reinvestment

The following scenario illustrates the reporting requirements for an Industry Member whose customers participate in a dividend reinvestment program. Industry Member Broker 1 aggregates dividend reinvestment investment program (DRIP) orders for participating customers, rounds up to the next whole share, and creates a new order to purchase shares that need to be allocated to customers. This order is routed to the street, executed, and allocated to the participating customers. The remaining fractional share is allocated to the proprietary account of Broker 1.

Post Trade Allocation events for allocations to sub-accounts are not reportable until Phase 2c.

Industry Member Broker 1 is required to report:

- · The order created to acquire shares for all customers participating in the dividend reinvestment program (New Order event)
- · The route of the order to Broker 2 (Order Route event)

Industry Member Broker 2 is required to report:

- · The receipt of the order from Broker 1 (Order Accepted event)
- · The execution of the order (Trade event)

Once the fractional inventory reaches a whole share threshold, Broker 1 would follow standard procedures for sales from proprietary accounts if actions were taken to flatten fractional share inventory.

Industry Member Broker 1 is required to report:

- · The whole share order (New Order event)
- · The route of the order to Broker 3 (Order Route event)

Industry Member Broker 3 is required to report:

- · The receipt of the order from Broker 1 (Order Accepted event)
- · The execution of the order (Trade event)

#	Step	Reported Event	Comments
1	Broker 1 aggregates the orders for DRIP participant customers into a single order	*NA*	
2	Broker 1 originates an order rounded up to the nearest whole share	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180424T000000 orderID: O11235 symbol: XYZ eventTimestamp: 20180424T113018.543458 manualFlag: false deptType: A side: B price: 10.00 quantity: 113	The broker must populate a value of 'DIV' in the *handlingInstructions* field to indicate that the order is part of a Dividend Reinvestment acquisition

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20180424 tradingSession: REG handlingInstructions: DIV custDspIntrFlag: false firmDesignatedID: ID09876 accountHolderType: V affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180424T000000 orderID: O11235 symbol: XYZ eventTimestamp: 20180424T113018.545458 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: OBB12345 side: B price: 10.00 quantity: 113 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false isoInd: N handlingInstructions:	In phase 2c, since the values in the *handlingInstructions* field have not changed from the New Order to the Order Route, FRMA may populate "RAR" in the *handlingInstructions* field indicating the order was "routed as received". Alternatively, firms have the option to re-state all *handlingInstructions* values.
4	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180424T000000 orderID: O28765 symbol: XYZ eventTimestamp: 20180424T113018.943458 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F	

#	Step	Reported Event	Comments
		routedOrderID: OBB12345 affiliateFlag: false deptType: T side: B price: 10.00 quantity: 113 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Broker 2 executes the full quantity of order	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180424T000000 tradeID: BBB12345 symbol: XYZ eventTimestamp: 20180424T113019.123456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 113 price: 10.00 capacity: A tapeTradeID: BAA89898 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180424T000000 orderID: O28765 side: B sellDetails: orderKeyDate: 20180424T000000 orderID: BO445 side: SL	
6	Broker 1 allocates the shares to its customers	*NA*	
7	Broker 1 originates an order from its firm account to flatten its fractional share inventory	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180427T000000 orderID: OD56391	

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180427T113015.123456 manualFlag: false deptType: T side: SL price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180427 tradingSession: REG custDspIntrFlag: false firmDesignatedID: DIVACC05 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
8	Broker 1 routes the order to Broker 3	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180427T000000 orderID: OD56391 symbol: XYZ eventTimestamp: 20180427T113015.125456 manualFlag: false senderIMID: FRMA destination: BROKER3 destinationType: F routedOrderID: O23C565 side: SL price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180427 tradingSession: REG affiliateFlag: false isoInd: N	
9	Broker 3 accepts the order from Broker 1	*Broker 3 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180427T000000 orderID: O31234 symbol: XYZ	

| #	Step	Reported Event	Comments
		eventTimestamp: 20180427T113015.135456 manualFlag: false receiverIMID: BROKER3 senderIMID: FRMA senderType: F routedOrderID: O23C565 affiliateFlag: false deptType: T side: SL price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180427 tradingSession: REG isoInd: NA custDspIntrFlag: false	
10	Broker 3 executes the full quantity of order	*Broker 3 reports a* **Trade event** type: MEOT tradeKeyDate: 20180427T000000 tradeID: T1A0008 symbol: XYZ eventTimestamp: 20180427T113015.235456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1 price: 10.00 capacity: A tapeTradeID: ABC171722 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180427T000000 orderID: O45329 side: B sellDetails: orderKeyDate: 20180427T000000 orderID: O31234 side: SL	

2.15. Additional Reporting Scenarios

2.15.1. GTC Order Routed to Exchange, Modified by Customer

The following scenario illustrates the CAT reporting requirements when an Industry Member receives a multi-day order from a customer, and routes the order to an exchange as a DAY order.

When the Industry Member receives the order from the customer, the order is reported to CAT as a GTC order. When the Industry Member routes the order to the exchange for execution, the order is routed as a "DAY" order, and must be reported to CAT as a "DAY" on the Order Route event reported by the Industry Member as well as relevant Participant events as outlined in the CAT Reporting Technical Specifications for Plan Participants. The Industry Member must submit an Order Route event every day that the order is sent to the exchange until the order is executed or cancelled.

On T+1, the customer modifies the GTC order. Broker 1 must report an Order Modified event with the original order date and an Order Route event for the modification on the exchange.
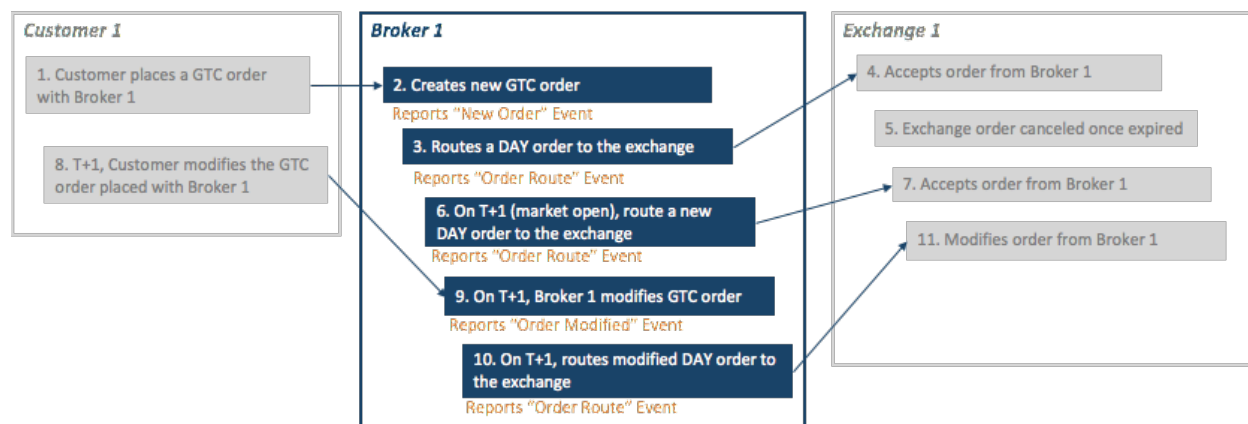
Industry Member Broker 1 is required to report:

- The receipt of the customer GTC order on T (New Order event)
- The route of the order to the exchange on T as a "DAY" order (Order Route event)
- The route of the order to the exchange on T+1 (start of day) as the order was not executed or cancelled on T (Order Route event)
- The modification of the customer order on T+1 (during market hours) (Order Modified event)
- The route of the modification to the exchange on T+1 (Order Route event)

#	Step	Reported Event	Comments
1	Customer sends a new GTC order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order** event* type: MENO	

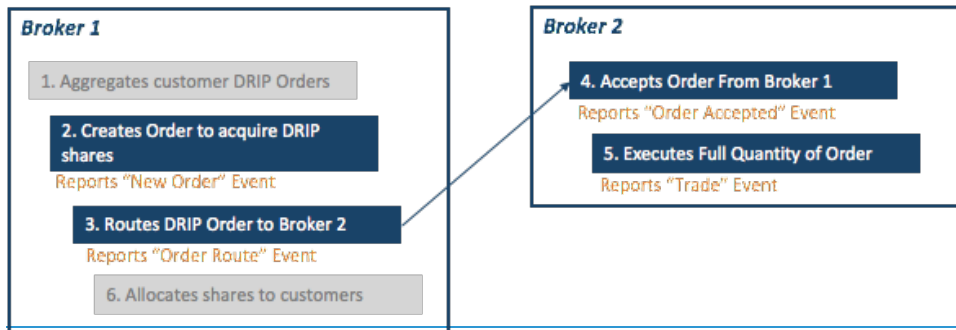| #	Step	Reported Event	Comments
		orderKeyDate: 20180417T000000 orderID: O76543 symbol: XYZ eventTimestamp: 20180417T153035.123456 manualFlag: false deptType: A side: Buy price: 9.50 quantity: 1000 orderType: LMT timeInForce: GTC tradingSession: REG custDspIntrFlag: false firmDesignatedID: FDI345 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to Exchange 1 as a DAY order	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O76543 symbol: XYZ eventTimestamp: 20180417T153035.124456 manualFlag: false senderIMID: BROKER1 destination: EXCH1 destinationType: E routedOrderID: RT91234 session: s1t2 side: Buy price: 9.50 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
4	Exchange 1 accepts the order from Broker 1	*Exchange 1 reports a Participant **Order Accepted event***	
5	At close of business on T, the order on the		

#	Step	Reported Event	Comments
	exchange expires		
6	At start of day T+1, Broker 1 routes the order to Exchange 1 as a DAY order	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O76543 symbol: XYZ eventTimestamp: 20180418T093000.000000 manualFlag: false senderIMID: BROKER1 destination: EXCH1 destinationType: E routedOrderID: RT91235 session: s1t2 side: Buy price: 9.50 quantity: 1000 orderType: LMT timeInForce: DAY=2018041~~8~~7 tradingSession: REG affiliateFlag: false isoInd: NA	The *orderKeyDate* reflects the date and time the Order Key was assigned, which is the previous day. Since Broker 1 is routing the order to a national securities exchange, *session* is required.
7	Exchange 1 accepts the order from Broker 1	*Exchange 1 reports a Participant **Order Accepted event***	
8	On T+1, the customer modifies the GTC order, reducing share quantity	*NA*	
9	Broker 1 modifies the order per the customer's instructions	*Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180418T000000 orderID: OM87654 symbol: XYZ priorOrderID: O76543 priorOrderKeyDate: 20180417 eventTimestamp: 20180418T103045.123456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: Customer side: Buy	Upon receipt of the modification, Broker 1 assigns a new Order Key with *orderID* OM87654. The Prior Order Key with *orderID* O76543 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with the New Order event. Since the modification was received from a non-CAT reporting customer, the *receiverIMID, senderIMID, senderType,* and *routedOrderID* fields are not required.

#	Step	Reported Event	Comments
		price: 9.50 quantity: 900 leavesQty: 900 orderType: LMT timeInForce: GTC tradingSession: REG custDspIntrFlag: false	
10	Broker 1 routes the modified order to Exchange 1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180418T000000 orderID: OM87654 symbol: XYZ eventTimestamp: 20180418T103045.323456 manualFlag: false senderIMID: BROKER1 destination: EXCH1 destinationType: E routedOrderID: RT91236 session: s1t2 side: Buy price: 9.50 quantity: 900 orderType: LMT timeInForce: DAY=20180418 tradingSession: REG affiliateFlag: false isoInd: NA	
11	Exchange 1 accepts modified order from Broker 1	*Exchange 1 reports a Participant **Order Modified event***	

2.15.2. Dividend Reinvestment

The following scenario illustrates the reporting requirements for an Industry Member whose customers participate in a dividend reinvestment program. Industry Member Broker 1 aggregates dividend reinvestment investment program (DRIP) orders for participating customers, rounds up to the next whole share, and creates a new order to purchase shares that need to allocate to customers. This order is routed to the street, executed, and allocated to the participating customers. The remaining fractional share is allocated to the proprietary account of Broker 1.

Post Trade Allocation events for allocations to sub-accounts are not reportable until Phase 2c.

Broker 1

1. Aggregates customer DRIP Orders

2. Creates Order to acquire DRIP shares
Reports "New Order" Event

3. Routes DRIP Order to Broker 2
Reports "Order Route" Event

6. Allocates shares to customers

Broker 2

4. Accepts Order From Broker 1
Reports "Order Accepted" Event

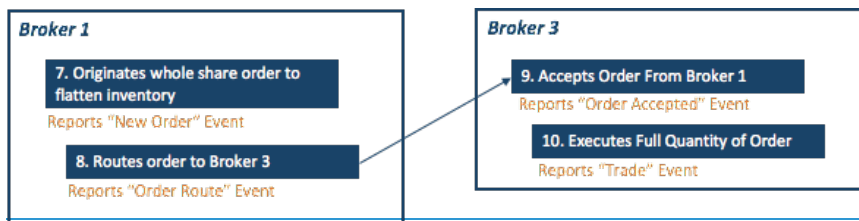5. Executes Full Quantity of Order
Reports "Trade" Event

Industry Member Broker 1 is required to report:

- The order created to acquire shares for all customers participating in the dividend reinvestment program (New Order event)
- The route of the order to Broker 2 (Order Route event)

Industry Member Broker 2 is required to report:

- The receipt of the order from Broker 1 (Order Accepted event)
- The execution of the order (Trade event)

Once the fractional inventory reaches a whole share threshold, Broker 1 would follow standard procedures for sales from proprietary accounts if actions were taken to flatten fractional share inventory.

Broker 1

7. Originates whole share order to flatten inventory
Reports "New Order" Event

8. Routes order to Broker 3
Reports "Order Route" Event

Broker 3

9. Accepts Order From Broker 1
Reports "Order Accepted" Event

10. Executes Full Quantity of Order
Reports "Trade" Event

Industry Member Broker 1 is required to report:

- The whole share order (New Order event)
- The route of the order to Broker 3 (Order Route event)

Industry Member Broker 3 is required to report:

- The receipt of the order from Broker 1 (Order Accepted event)
- The execution of the order (Trade event)

#	Step	Reported Event	Comments
1	Broker 1 aggregates the orders for DRIP participant customers into a single order	N/A	
2	Broker 1 originates an order rounded up to the	Broker 1 reports a **New Order event**	The broker must populate a value of 'DIV' in the *handlingInstructions* field

| | nearest whole share | type: MENO
orderKeyDate: 20180424T000000
orderID: O11235
symbol: XYZ
eventTimestamp:
20180424T113018.543458
manualFlag: false
deptType: A
side: B
price: 10.00
quantity: 113
orderType: LMT
timeInForce: DAY=20180424
tradingSession: REG
handlingInstructions: DIV
custDspIntrFlag: false
firmDesignatedID: ID09876
accountHolderType: V
affiliateFlag: false
negotiatedTradeFlag: false
representativeInd: N | to indicate that the order if part of a Dividend Reinvestment acquisition |
| 3 | Broker 1 routes the order to Broker 2 | *Broker 1 reports an **Order Route event***

type: MEOR
orderKeyDate: 20180424T000000
orderID: O11235
symbol: XYZ
eventTimestamp:
20180424T113018.545458
manualFlag: false
senderIMID: FRMA
destination: FRMB
destinationType: F
routedOrderID: OBB12345
side: B
price: 10.00
quantity: 113
orderType: LMT
timeInForce: DAY=20180424
tradingSession: REG
affiliateFlag: false
isoInd: N
handlingInstructions: | In phase 2c, since the values in the *handlingInstructions* field have not changed from the New Order to the Order Route, FRMA may populate "RAR" in the *handlingInstructions* field indicating the order was "routed as received". Alternatively, firms have the option to re-state all *handlingInstructions* values. |

#	Step	Reported Event	Comments
4	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180424T000000 orderID: O28765 symbol: XYZ eventTimestamp: 20180424T113018.943458 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: OBB12345 affiliateFlag: false deptType: A side: B price: 10.00 quantity: 113 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Broker 2 executes the full quantity of order	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180424T000000 tradeID: BBB12345 symbol: XYZ eventTimestamp: 20180424T113019.123456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 113 price: 10.00 capacity: A tapeTradeID: BAA89898 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180424T000000 orderID: O28765 side: B sellDetails:	

| #	Step	Reported Event	Comments
		orderKeyDate: 20180424T000000 orderID: BO445 side: SL	
6	Broker 1 allocates the shares to its customers	NA	
7	Broker 1 originates an order from its firm account to flatten its fractional share inventory	Broker 1 reports a **New Order event** type: MENO orderKeyDate: 20180427T000000 orderID: OD56391 symbol: XYZ eventTimestamp: 20180427T113015.123456 manualFlag: false deptType: T side: SL price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180427 tradingSession: REG custDspIntrFlag: false firmDesignatedID: DIVACC05 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
8	Broker 1 routes the order to Broker 3	Broker 1 reports an **Order Route event** type: MEOR orderKeyDate: 20180427T000000 orderID: OD56391 symbol: XYZ eventTimestamp: 20180427T113015.125456 manualFlag: false senderIMID: FRMA destination: BROKER3 destinationType: F routedOrderID: O23C565 side: SL price: 10.00 quantity: 1 orderType: LMT	

#	Step	Reported Event	Comments
		timeInForce: DAY=20180427 tradingSession: REG affiliateFlag: false isoInd: N	
9	Broker 3 accepts the order from Broker 1	*Broker 3 reports an* **Order Accepted event** type: MEOA orderKeyDate: 20180427T000000 orderID: O31234 symbol: XYZ eventTimestamp: 20180427T113015.135456 manualFlag: false receiverIMID: BROKER3 senderIMID: FRMA senderType: F routedOrderID: O23C565 affiliateFlag: false deptType: T side: SL price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180427 tradingSession: REG isoInd: NA custDspIntrFlag: false	
10	Broker 3 executes the full quantity of order	*Broker 2 reports a* **Trade event** type: MEOT tradeKeyDate: 20180427T000000 tradeID: T1A0008 symbol: XYZ eventTimestamp: 20180427T113015.235456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1 price: 10.00 capacity: A tapeTradeID: ABC171722 marketCenterID: DN sideDetailsInd: NA buyDetails:	

#	Step	Reported Event	Comments
		~~orderKeyDate: 20180427T000000~~ ~~orderID: O45329~~ ~~side: B~~ ~~sellDetails:~~ ~~orderKeyDate: 20180427T000000~~ ~~orderID: O31234~~ ~~side: SL~~	

2.15.2.   **Routing of the Equity Leg of a Complex Option to another Industry Member**

This scenario illustrates the CAT reporting requirements when Industry Member Broker 1 splits the equity leg of complex option orders received from customers. Upon determining the price at which the equity legs must be executed, the Industry Member routes the equity legs to Industry Member Broker 2, who crosses the orders.

This scenario illustrates the requirements for reporting the equity leg of a complex option, and does not include reporting requirements for the complex option orders or option legs. Refer to CAT FAQ B12 for additional information.
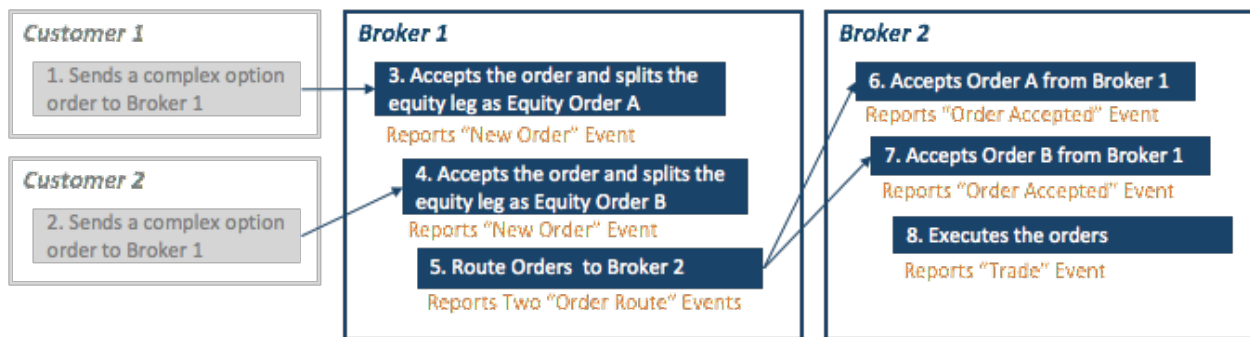
Industry Member Broker 1 is required to report:

·   The receipt of the equity orders from its customers (New Order events)
·   The route of the equity orders to Broker 2 (Order Route events)

Industry Member Broker 2 is required to report:

·   The receipt of the equity leg order (Sell) from Broker 1 (Order Accepted event)
·   The receipt of the equity leg order (Buy) from Broker 1 (Order Accepted event)
·   The execution of the orders (Trade Event)

#	Step	Reported Event	Comments
1	Customer 1 sends a complex option order to Broker 1	*NA*	
2	Customer 2 sends a complex option order to Broker 1	*NA*	
3	Broker 1 accepts the customer order and splits the equity leg	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: CO12345 symbol: XYZ eventTimestamp: 20180417T153035.123456 manualFlag: false deptType: A side: B price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: OPT custDspIntrFlag: false firmDesignatedID: INS345 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Broker 1 is required to report a *handlingInstructions* value of "OPT" in its New Order event indicating that this is an options related transaction.
4	Broker 1 accepts the customer order and splits the equity leg	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: CO6789 symbol: XYZ eventTimestamp: 20180417T153035.523456 manualFlag: false deptType: A side: SL price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: OPT custDspIntrFlag: false	Broker 1 is required to report a *handlingInstructions* value of "OPT" in its New Order event indicating that this is an options related transaction.

#	Step	Reported Event	Comments
		firmDesignatedID: INS999 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
5	Broker 1 routes the equity leg orders to Broker 2	*Broker 1 (IMID = BRKA) reports an* **Order Route event (1 of 2)** type: MEOR orderKeyDate: 20180417T000000 orderID: CO12345 symbol: XYZ eventTimestamp: 20180417T153035.553456 manualFlag: false senderIMID: BRKA destination: BRKB destinationType: F routedOrderID: RTCO12345 side: B price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: *Broker 1 (IMID = BRKA) reports an* **Order Route event (2 of 2)** type: MEOR orderKeyDate: 20180417T000000 orderID: CO6789 symbol: XYZ eventTimestamp: 20180417T153035.553456 manualFlag: false senderIMID: BRKA destination: BRKB destinationType: F routedOrderID: RTCO6789 side: SL price: 10.00 quantity: 200 orderType: LMT	In phase 2c, since the values in the *handlingInstructions* field have not changed from the New Order to the Order Route, BRKA may populate "RAR" in the *handlingInstructions* field indicating the order was "routed as received"*.* Alternatively, firms have the option to re-state all *handlingInstructions* values.

#	Step	Reported Event	Comments
		timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
6	Broker 2 accepts the order from Broker 1	*Broker 2 (IMID = BRKB) reports an* **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000 orderID: RTB910 symbol: XYZ eventTimestamp: 20180417T153035.853456 manualFlag: false receiverIMID: BRKB senderIMID: BRKA senderType: F routedOrderID: RTCO12345 affiliateFlag: false deptType: T side: B price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	Broker 2 is required to report a *handlingInstructions* value of "OPT" in its Order Accepted event indicating that this is an options related transaction.
7	Broker 2 accepts the routed order from Broker 1	*Broker 2 (IMID = BRKB) reports an* **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000 orderID: RTB909 symbol: XYZ eventTimestamp: 20180417T153035.853456 manualFlag: false receiverIMID: BRKB senderIMID: BRKA senderType: F routedOrderID: RTCO6789 affiliateFlag: false deptType: T	-Broker 2 is required to report a *handlingInstructions* value of "OPT" in its Order Accepted event indicating that this is an options related transaction.

#	Step	Reported Event	Comments
		side: SL price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	
8	Broker 2 crosses the Buy and Sell orders	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ123 symbol: XYZ eventTimestamp: 20180417T153035.883456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 200 price: 10.00 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: RTB910 side: B sellDetails: orderKeyDate: 20180417T000000 orderID: RTB909 side: SL	

2.15.4.2.15.3. Receipt and Route of the Equity Leg of a Complex Order with a Net Price

This scenario illustrates the Phase 2a reporting requirements when an Industry Member receives a complex order involving both an equity leg and an options leg at a net price. In this scenario, Industry Member Broker 1 receives a complex order from a customer involving both an equity leg and an options

leg at a net price, and routes the complex order to Industry Member Broker 2 with instructions to treat as a complex order with a net price.

Upon receipt of the net priced order, Industry Member Broker 2 splits the complex order into individual option and equity legs, determines the price at which each leg must be executed, and routes the equity leg to Industry Member Broker 3 for execution.
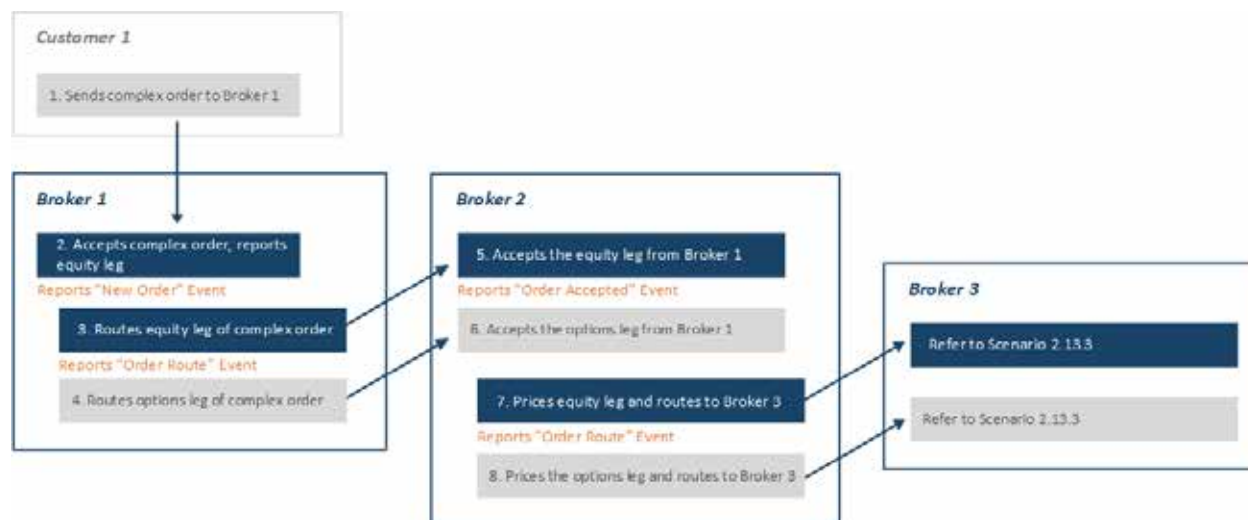
Industry Member Broker 1 is required to report:

- The receipt of the equity leg of the complex order from its customer as a market order with a *handlingInstructions* value of 'OPT' (New Order event)
- The route of the equity leg of the complex order to Broker 2 as a market order with a *handlingInstructions* value of 'OPT' (Order Route event)

Industry Member Broker 2 is required to report:

- The receipt of the equity leg of the complex order from Broker 1 as a market order with a *handlingInstructions* value of 'OPT' (Order Accepted event)
- The route of the individually priced equity order to Broker 3 as a priced order with a *handlingInstructions* value of 'OPT' (Order Route event)

For Broker 3's CAT reporting obligation, please refer to Scenario 3052.15.2~~2.13.3~~.

In this scenario, since the complex order contains a net price, Broker 1 must report the receipt and route of the equity leg as an unpriced market order with a *handlingInstructions* value of 'OPT'. In Phases 2a and 2c, CAT will interpret the combination of a market order with a *handlingInstructions* value of~~as~~ 'OPT' as an order with a net price. In Phase 2d, a net price will be required.

While *handlingInstructions* are generally not required on Order Route events until Phase 2c, Broker 1 must report a *handlingInstructions* value of 'OPT' on its Order Route event so it is not reflected in CAT as

the route of an ordinary market order. Broker 2 must also report a *handlingInstructions* value of 'OPT' on its Order Route event so the price at which the order is routed is properly reflected as the price of an options related transaction.

The option leg of the complex order is not reportable until Phase 2d. In Phase 2d, the reporting requirements for the equity leg will change to include a complex order ID that will be used to link the equity and option legs. The net price of the complex order will also be reportable in Phase 2d. Complex orders received and routed directly to an exchange are not reportable until Phase 2d and cannot be voluntarily reported in earlier phases.

#	Step	Reported Event	Comments
1	Customer originates a complex option order	*NA*	
2	Customer routes the complex order to Broker 1	*NA*	
3	Broker 1 accepts the complex order from the customer and reports the equity leg	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: CO12345 symbol: XYZ eventTimestamp: 20180417T153035.123456 manualFlag: false deptType: A side: B price: quantity: 200 orderType: MKT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: OPT custDspIntrFlag: false firmDesignatedID: INS345 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	In Phases 2a and 2c, since the customer order is an equity leg of a complex option that contains a net price, Broker 1 must report an *orderType* of 'MKT', a blank *price*, and a *handlingInstructions* value of 'OPT'. CAT will interpret this combination of values as an order containing a net price. In Phase 2d, Broker 1 will be required to report a net price. The option leg of the complex order is not reportable until Phase 2d.
4	Broker 1 routes the complex order to Broker 2 and reports the equity leg	*Broker 1 (IMID = BRKA) reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: CO12345 symbol: XYZ	While *handlingInstructions* are generally not required on Order Route events until Phase 2c, Broker 1 must report a *handlingInstructions* value of 'OPT' so the route is not reflected in CAT as the route of an ordinary market order.

#	Step	Reported Event	Comments
		eventTimestamp: 20180417T153035.553456 manualFlag: false senderIMID: BRKA destination: BRKB destinationType: F routedOrderID: RTCO12345 side: B price: quantity: 200 orderType: MKT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: OPT	
5	Broker 2 accepts the complex order from Broker 1 and reports the equity leg.	*Broker 2 (IMID = BRKC) reports an* **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000 orderID: RTB910 symbol: XYZ eventTimestamp: 20180417T153035.853456 manualFlag: false receiverIMID: BRKB senderIMID: BRKA senderType: F routedOrderID: RTCO12345 affiliateFlag: false deptType: T side: B price: quantity: 200 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	Broker 2 must report the *handlingInstruction*s value of 'OPT' that was received from Broker 1.
6	Broker 2 prices the individual legs and routes the equity leg to Broker 3	*Broker 2 (IMID = BRKB) reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000	Since Broker 2 has assigned a price to the equity leg, the *price* field must be populated. Since Broker 2 knows that the order is the equity leg of a complex option,

#	Step	Reported Event	Comments
		orderID: RTB910 symbol: XYZ eventTimestamp: 20180417T153036.553456 manualFlag: false senderIMID: BRKB destination: BRKC destinationType: FE routedOrderID: RTCO12345 side: B price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: OPT	Broker 2 will be required to report a *handlingInstructions* value of 'OPT'.
7	Broker 3 accepts the equity leg from Broker 32 and further handles the order	For Broker 3's CAT reporting obligation, refer to Scenario 2.15.2.2.13.3	

2.15.5.2.15.4. Order Fulfillment Amendment

This scenario illustrates the CAT reporting requirements when an Industry Member amends the price of a customer fill that was reported to CAT earlier that day, then amends the price of the customer fill again the next day. Refer to section 4.13.12 of the CAT Reporting Technical Specifications for Industry Members for additional information.

For the purpose of this example, details of order handling on the original day are not included.

Industry Member Broker 1 is required to report:

- The fill of the customer order on a Riskless Principal basis on Day T (Order Fulfillment event)
- The amendment of the price of the customer fill on day T (Order Fulfillment Amendment event)
- The amendment of the price of the customer fill on day T+1 (Order Fulfillment Amendment event)

#	Step	Reported Event	Comments
1	On day T, Broker 1 accepted a customer order and filled the order on a Riskless Principal basis	*Broker 1 (IMID = FRMA) reports an* **Order Fulfillment event** type: MEOF fillKeyDate: 20180417T000000 fulfillmentID: AABB1231 symbol: XYZ eventTimestamp: 20180417T153035.326456 manualFlag: false fulfillmentLinkType: Y quantity: 500 price: 9.99 capacity: R clientDetails: orderKeyDate: 20180417T000000 orderID: O12345 side: B firmDetails: orderKeyDate: 20180417T000000 orderID: O999 side: SL	
2	On T, Broker 1 amends the price of the customer fill	*On T, Broker 1 reports an* **Order Fulfillment Amendment event** type: MEFA fillKeyDate: 20180417T000000 fulfillmentID: AACC1231 priorFillKeyDate: 20180417T000000 priorFulfillmentID: AABB1231 symbol: XYZ eventTimestamp: 20180417T153037.326456 manualFlag: false quantity: 500 capacity: R price: 9.98 fulfillmentLinkType: Y clientDetails: orderKeyDate: 20180417T000000	In this example, Broker 1 assigns a new Fulfillment Key with *fulfillmentID* AACC1231 when the fulfillment is amended. The *fillKeyDate* must be populated with the date that the new Fulfillment Key was assigned. The Prior Fill Key with *fulfillmentID* AABB1231 must be populated in the *priorFulfillmentID* field, and the *priorFillKeyDate* must be populated with the date the Fulfillment Key was assigned in the original Order Fulfillment event.

#	Step	Reported Event	Comments
		orderID: O12345 side: B firmDetails: orderKeyDate: 20180417T000000 orderID: O999 side: SL	
3	On T+1, Broker 1 amends the price of the customer fill again	*On T+1, Broker 1 reports an* **Order Fulfillment Amendment event** type: MEFA fillKeyDate: 20180418T000000 fulfillmentID: AADD1231 priorFillKeyDate: 20180417T000000 priorFulfillmentID: AACC1231 symbol: XYZ eventTimestamp: 20180418T153035.326456 manualFlag: false quantity: 500 capacity: R price: 9.97 fulfillmentLinkType: Y clientDetails: orderKeyDate: 20180417T000000 orderID: O12345 side: B firmDetails: orderKeyDate: 20180417T000000 orderID: O999 side: SL	In this example, Broker 1 assigns a new Fulfillment Key with *fulfillmentID* AADD1231 when the fulfillment is amended. The *fillKeyDate* must be populated with the date that the new Fulfillment Key was assigned. The Prior Fill Key with *fulfillmentID* AACC1231 must be populated in the *priorFulfillmentID* field, and the *priorFillKeyDate* must be populated with the date the Fulfillment Key was assigned in the previous Fulfillment Amendment event.

2.16.   JSON and CSV Examples

This provides an illustration of the different reporting formats of JSON and CSV. Refer to Section 2.54 of the CAT Reporting Technical Specifications for Industry Members for additional information.

2.16.1. JSON Representation

Below is a JSON representation using the example in Scenariosection 2.2.22.2.2 Internalized Trade against Proprietary Account.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	

2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event***
		
		type: MENO
		orderKeyDate: 20180416T000000
		orderID: O12345
		symbol: XYZ
		eventTimestamp: 20180416T153035.234456
		manualFlag: false
		deptType: T
		side: B
		price: 10.00
		quantity: 500
		orderType: LMT
		timeInForce: DAY=20180416
		tradingSession: REG
		custDspIntrFlag: false
		firmDesignatedID: INS001
		accountHolderType: A
		affiliateFlag: false
		negotiatedTradeFlag: false
		representativeInd: N
			`{`
			` "type": "MENO",`
			` "orderKeyDate": "20180416T000000",`
			` "orderID":"O12345",`
			` "symbol": "XYZ",`
			` "eventTimestamp": "20180416T153035.234456",`
			` "manualFlag": false,`
			` "deptType": "T",`
			` "side": "B",`
			` "price": 10.00,`
			` "quantity": 500,`
			` "orderType": "LMT",`
			` "timeInForce": {"DAY": 20180416},`
			` "tradingSession": "REG",`
			` "custDspIntrFlag": false,`
			` "firmDesignatedID": "INS001",`
			` "accountHolderType": "A",`
			` "affiliateFlag": false,`
			` "negotiatedTradeFlag": false,`
			` "representativeInd": "N"`
			`}`

3	Broker 1 executes the order against own proprietary account	*Broker 1 reports a **Trade event***
		
		type: MEOT
		tradeKeyDate: 20180416T000000
		eventTimestamp: 20180416T153035.253456
		manualFlag: false
		cancelFlag: false
		cancelTimestamp:
		symbol: XYZ
		tradeID: TXYZ555
		quantity: 500
		price: 10.00
		capacity: P
		tapeTradeID:TRF123
		marketCenterID: DN
		sideDetailsInd: NA
		buyDetails:
		   orderKeyDate: 20180416T000000
		   orderID: O12345
		    side: B
		sellDetails:
			`{`
			` "type": "MEOT",`
			` "tradeKeyDate": "20180416T000000",`
			` "eventTimestamp": "20180416T153035.253456",`
			` "manualFlag": false,`
			` "cancelFlag": false,`
			` "cancelTimestamp":`
			` "symbol": "XYZ",`
			` "tradeID": "TXYZ555",`
			` "quantity": 500,`
			` "price": 10.00,`
			` "capacity": "P",`
			` "tapeTradeID": "TRF123",`
			` "marketCenterID": "DN",`
			` "sideDetailsInd": "NA",`
			` "buyDetails":[`
			`  {`
			`   "OrderKeyDate": "20180416T000000",`
			`   "orderID": "O12345",`
			`   "side": "B"`
			`  }`
			` ],`
			` "sellDetails":[`

#	Step	Reported Event	Comments

		side: SL
		firmDesignatedID: PROP123
		accountHolderType: P
			{
			  "side": "SL",
			  "firmDesignatedID":
			  "PROP123",
			  "accountHolderType": "P"
			  }
			]

2.16.2. CSV Representation

Below is the corresponding CSV representation of the same sample events.

Step 2: New Order Event

```
,,,MENO,,20180416T000000,O12345,XYZ,20180416T153035.234456,
false,,,T,,,B,10.00,500,,LMT,DAY=20180416,REG,,false,INS001,A,false,,,false,N,,,,,,,,,,,,
```

Step 3: Trade Event

```
,,,MEOT,,20180416T000000,TXYZ555,XYZ,20180416T153035.253456,false,false,,,,,500,10.00,P,TRF
123,DN,NA,20180416T000000@O12345@B@@@@,@@SL@@123FPAEXC@P@,,,,,,,,,
```

3.   Option Scenarios and Examples

This section illustrates reporting scenarios for single leg electronic option events in scope for Phase 2b. Each example includes a process flow table and sample reporting values. Refer to Section 5 of the CAT Reporting Technical Specifications for Industry Members, along with Published Options guidance and Section K of the CAT FAQs regarding Options for additional information.

3.1.   Option Order Origination and Route Scenarios

This section illustrates the CAT reporting requirements when an order is received or originated, and is subsequently routed away from the firm for execution. Refer to Section 5.4 of the CAT Reporting Technical Specifications for Industry Members for additional information.

3.1.1.   New Principal Option Order Routed to Exchange and Executed

This scenario illustrates the CAT reporting requirements when an Industry Member originates a new principal option order electronically, and electronically routes the order to an exchange where it is executed.
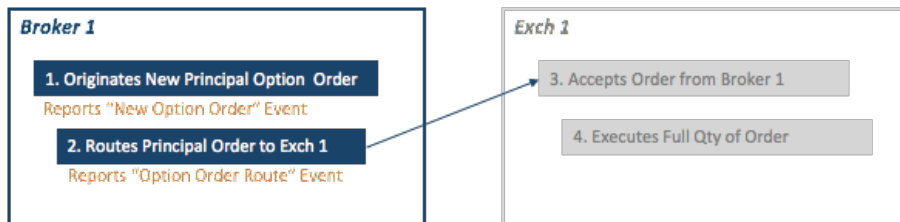
Industry Member Broker 1 is required to report:

·   The origination of a principal option order (New Option Order event)

·   The route to an exchange (Option Order Route event)

#	Step	Reported Event	Comments
1	Broker 1 originates an order from its proprietary account	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20180516T000000 orderID: OFP544 optionID: ABCD 191220C00095000 eventTimestamp: 20180516T133031.127 deptType: T side: B price: 9.95 quantity: 20 orderType: LMT timeInForce: DAY=20180516	

#	Step	Reported Event	Comments
		tradingSession: REG firmDesignatedID: 123FPAEXC accountHolderType: P affiliateFlag: false openCloseIndicator: Open representativeInd: N	
2	Broker 1 routes the option order to Exch 1	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: OFP544 optionID: ABCD 191220C00095000 eventTimestamp: 20180516T133031.129 senderIMID: AEXC destination: OEXCH destinationType: E routedOrderID: RTOFP544 session: 2102 side: B price: 9.95 quantity: 20 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG exchOriginCode: F affiliateFlag: false openCloseIndicator: Open	
3	Exch 1 accepts the option order from Broker 1	*Exchange reports a Participant **Simple Option Order Accepted event***	
4	Exch 1 executes the full quantity of the option order	*Exchange reports a Participant **Simple Option Trade event***	

3.1.2. Customer Option Order Routed to the Exchange and Executed

This scenario illustrates the CAT reporting requirements when an Industry Member routes a customer order to an exchange for execution.

Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Option Order event)
- · The route of the customer order to the exchange (Option Order Route event)

#	Step	Reported Event	Comments
1	Customer electronically sends an option order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a* **New Option Order event** type: MONO orderKeyDate: 20180516T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133031.1234 deptType: A side: SL price: 6.60 quantity: 30 minQty: 10~~0~~ orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: NH|STP firmDesignatedID: CUS98765 accountHolderType: A affiliateFlag: false openCloseIndicator: Close representativeInd: N	
3	Broker 1 routes the option order to Exch 1	*Broker 1 reports an* **Option Order Route event** type: MOOR orderKeyDate: 20180516T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133031.1684	In phase 2c, since the values in the *handlingInstructions* field have not changed from the New Option Order to the Option Order Route, BRKR01 may populate "RAR" in the *handlingInstructions* field indicating the order was "routed as received". Alternatively, firms have the option to re-state all *handlingInstructions* values.

#	Step	Reported Event	Comments
		senderIMID: BRKR01 destination: OPEXCH1 destinationType: E routedOrderID: RT555 session: s5 side: SL price: 6.60 quantity: 30 minQty: 10~~0~~ orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: exchOriginCode: C affiliateFlag: false openCloseIndicator: Close	
4	Exch 1 accepts the option order from Broker 1	*Exchange reports a Participant* ***Simple Option Order Accepted event***	
5	Exch 1 executes the full quantity of the option order	*Exchange reports a Participant* ***Simple Option Trade event***	

3.1.3. Customer Option Order Electronically Routed between Two Industry Members and Subsequently Executed on an Exchange

This scenario illustrates the CAT reporting requirements when an option order is electronically routed from one Industry Member to another, and is further routed to an exchange for execution.
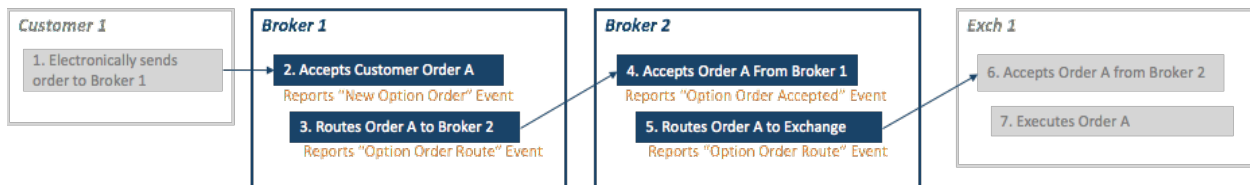
Industry Member Broker 1 is required to report:

- · The receipt of the customer order (New Option Order event)
- · The route of the customer option order to Broker 2 (Option Order Route event)

Industry Member Broker 2 is required to report:

- · The receipt of the order from Broker 1 (Option Order Accepted event)
- · The route of the order to the Exchange (Option Order Route event)

#	Step	Reported Event	Comments
1	Customer electronically sends an option order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a* **New Option Order event** type: MONO orderKeyDate: 20180516T000000 orderID: OA1B2C3 optionID: %XYZ 180601P00095000 eventTimestamp: 20180516T133031.1234 deptType: A side: B price: 5.5 quantity: 10 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG firmDesignatedID: C0001 accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	The option is a FLEX Percent option. Strike price is 95% of the closing price. Therefore, the *price* field is reported as a percentage, 5.5%, of the underlying close price.
3	Broker 1 routes the order to Broker 2	*Broker 1 reports an* **Option Order Route event** type: MOOR orderKeyDate: 20180516T000000 orderID: OA1B2C3 optionID: %XYZ 180601P00095000 eventTimestamp: 20180516T133031.1324 senderIMID: BRKR01 destination: BROKER2 destinationType: F routedOrderID: RT0789 side: B price: 5.5 quantity: 10 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG affiliateFlag: false openCloseIndicator: Open	

#	Step	Reported Event	Comments
4	Broker 2 accepts the order from Broker 1	*Broker 2 reports an* **Option Order Accepted event** type: MOOA orderKeyDate: 20180516T000000 orderID: O45678 optionID: %XYZ 180601P00095000 eventTimestamp: 20180516T133031.2324 receiverIMID: BROKER2 senderIMID: BRKR01 senderType: F routedOrderID: RT0789 deptType: A side: B price: 5.5 quantity: 10 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG affiliateFlag: false openCloseIndicator: Open	
5	Broker 2 routes order to the exchange	*Broker 2 reports an* **Option Order Route event** type: MOOR orderKeyDate: 20180516T000000 orderID: O45678 optionID: %XYZ 180601P00095000 eventTimestamp: 20180516T133031.2542 senderIMID: BROKER2 destination: EXCH1 destinationType: E routedOrderID: RT3210 session: s2 side: B price: 5.5 quantity: 10 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open	
6	Exch 1 accepts order	*Exchange reports a Participant*	

#	Step	Reported Event	Comments
	from Broker 2	*Simple Option Order Accepted event*	
7	Exch 1 executes the order	*Exchange reports a Participant Simple Option Trade event*	

3.1.4. Customer Option Order Received Manually and Routed Electronically to an Exchange for Execution

This scenario illustrates the CAT reporting requirements for Phase 2b when a customer order is received manually by an Industry Member. The order then is systematized by the Industry Member and electronically routed to an exchange for execution.
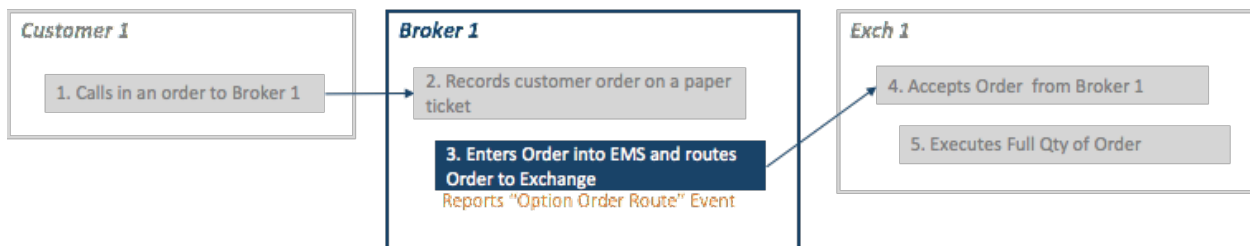
Industry Member Broker 1 is required to report:

·   The route of the option order to the exchange (Option Order Route event)

Manual option CAT events are not required in Phase 2b. In Phase 2b, the Industry Member must populate the *priorUnlinked* field on its Option Order Route event with a value of 'M' to indicate that the immediately preceding step is a manual event and is not reported in Phase 2b.

#	Step	Reported Event	Comments
1	Customer calls in an option order to Broker 1	*NA*	
2	Broker 1 manually receives the customer order	*NA*	In Phase 2b, Industry Members are not required to report orders received manually.
3	Broker 1 systematizes the order in its EMS and routes the order to the Exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: OP23456 optionID: XYZ 180601C00001925 eventTimestamp: 20180516T133033.1234 senderIMID: BRKR01 destination: EXCH1	The *orderKeyDate* is the date and time the Order Key was assigned. The *priorUnlinked* field must be populated with a value of 'M' to indicate that the immediately preceding event is not reportable, as it is a manual event.

#	Step	Reported Event	Comments
		destinationType: E routedOrderID: RT05252 session: s56 side: B price: 10 quantity: 50 orderType: LMT timeInForce: IOC tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open priorUnlinked: M	
4	Exch 1 accepts order from Broker 1	*Exchange reports a Participant* ***Simple Option Order Accepted event***	
5	Exch 1 executes the order	*Exchange reports a Participant* ***Simple Option Trade event***	

3.1.5. Customer Option Order Received Electronically and Routed Manually to another Industry Member

This scenario illustrates the CAT reporting requirements for Phase 2b when an Industry Member electronically receives a customer order that is manually routed to another Industry Member. The order is then electronically routed to an exchange for execution.
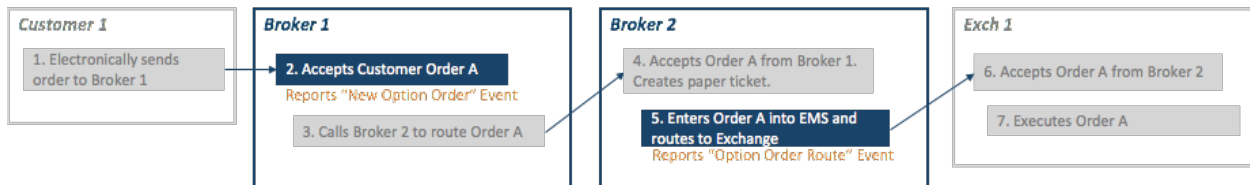
Industry Member Broker 1 is required to report:

· The electronic receipt of the customer order (New Option Order event)

Industry Member Broker 2 is required to report:

· The route of the option order to the exchange (Option Order Route event)

Manual option CAT events are not required in Phase 2b. In Phase 2b, Industry Member Broker 1 must populate the *nextUnlinked* field on its New Option Order event with a value of 'M' to indicate that the immediately following step is a manual event and is not reported in Phase 2b. If the *nextUnlinked* value is

unknown at the time of receipt, Industry Member Broker 1 may report this information in a separate Option Order Supplement event.

Industry Member Broker 2 must populate the *priorUnlinked* field on its Option Order Route event with a value of 'M' to indicate that the immediately preceding event is a manual event and is not reported in Phase 2b.

#	Step	Reported Event	Comments
1	Customer electronically sends an option order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20180516T000000 orderID: OP0912 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133031.1234 deptType: O side: B price: 11 quantity: 70 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: NH|STP firmDesignatedID: C0001 accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N nextUnlinked: M	The *nextUnlinked* flag must be populated with a value of 'M' to indicate that the immediately following event is not reportable, as is it a manual event. Alternatively, if the *nextUnlinked* value is unknown at the time of order receipt, a separate Option Order Supplement event may be reported to capture the *nextUnlinked* value.
3	Broker 1 calls Broker 2 routing the order	*NA*	In Phase 2b, Industry Members are not required to report orders routed manually.
4	Broker 2 manually accepts the order from Broker 1	*NA*	In Phase 2b, Industry Members are not required to report orders received manually.
5	Broker 2 systematizes the order and electronically routes the order to an exchange	*Broker 2 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: O32BA optionID: XYZ 180810C00001925	The *orderKeyDate* is the date and time the *orderID* was assigned. Since Broker 2 is routing the order to a national securities exchange, *session* is required.

#	Step	Reported Event	Comments
		eventTimestamp: 20180516T133035.1256 senderIMID: FIRM2 destination: EXCH1 destinationType: E routedOrderID: RT01111 session: sA2 side: B price: 11 quantity: 70 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: affiliateFlag: false exchOriginCode: C priorUnlinked: M	In Phase 2c, FIRM2 will be required to populate the *handlingInstructions* field with a value of "NH" and "STP" on its Option Order Route event. The p*riorUnlinked* field must be populated with a value of 'M' to indicate that the immediately preceding event is not reportable, as it is a manual event.
6	Exchange 1 accepts the order from Broker 2	*Exchange reports a Participant* ***Simple Option Order Accepted event***	
7	Exchange 1 executes the order	*Exchange reports a Participant* ***Simple Option Trade event***	

3.2.   Fulfillment Scenarios

3.2.1.   Broker Receives Single -Leg Electronic Orders, Creates a Combined Order and Routes the Combined Order to an Exchange

This scenario illustrates the Phase 2b reporting requirements when an Industry Member combines individual, simple option orders from customers before routing to an exchange as a single, simple order for execution. Refer to Section 5.11 of the CAT Reporting Technical Specifications for Industry Members for additional information.
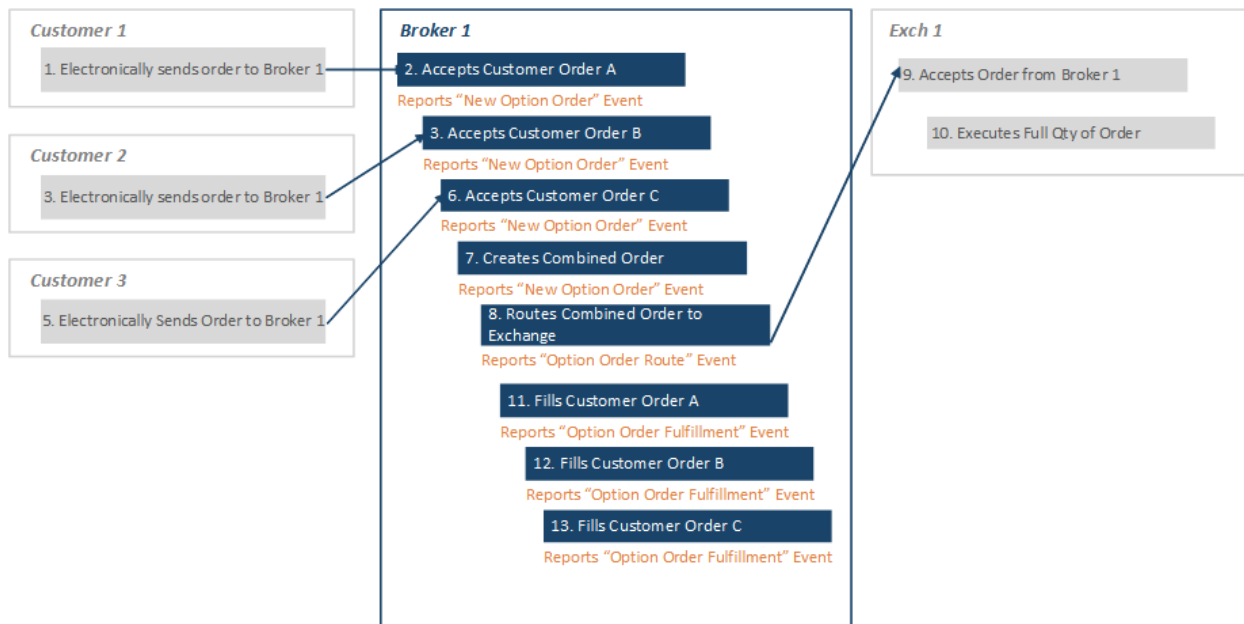
Industry Member Broker 1 is required to report:

- The electronic receipt of each single leg customer order (New Option Order events)
- The generation of the combined order (New Option Order event)
- The route of the combined order to the exchange (Option Order Route event)
- The fill of each customer order (Option Order Fulfillment event)

In Phase 2b, the New Option Order event representing the combined order must be populated with a *representativeInd* value of 'O' indicating that the order is an Options Combined order. The Option Order Fulfillment events must be populated with a *fulfillmentLinkType* value of 'O' indicating that the order is an Options Order Fulfillment.

Explicit linkage between the customer orders and the combined order is not required until Phase 2d.

#	Step	Reported Event	Comments
1	Customer 1 electronically sends a single leg option order to Broker 1	*NA*	
2	Customer 2 electronically sends a single leg option order to Broker 1	*NA*	
3	Customer 3 electronically sends a single leg option order to Broker 1	*NA*	
4	Broker 1 accepts the order from Customer 1	*Broker 1 reports a **New Option Order event***	

#	Step	Reported Event	Comments
		type: MONO orderKeyDate: 20180516T000000 orderID: O10987 optionID: XYZ 180906C00001875 eventTimestamp: 20180516T133031.1234 deptType: A side: B price: 3.90 quantity: 60 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: NH firmDesignatedID: C0001A accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	
5	Broker 1 accepts the order from Customer 2	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20180516T000000 orderID: O10988 optionID: XYZ 180906C00001875 eventTimestamp: 20180516T134520.1234 deptType: A side: B price: 3.90 quantity: 150 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: NH firmDesignatedID: C0001B accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	
6	Broker 1 accepts the order from Customer 3	*Broker 1 reports a **New Option Order event*** type: MONO	

#	Step	Reported Event	Comments
		orderKeyDate: 20180516T000000 orderID: O10989 optionID: XYZ 180906C00001875 eventTimestamp: 20180516T135540.1234 deptType: A side: B price: 3.90 quantity: 90 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: NH firmDesignatedID: C0001C accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	
7	Broker 1 generates a combined order.	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20180516T000000 orderID: O10990 optionID: XYZ 180906C00001875 eventTimestamp: 20180516T135610.1234 deptType: A side: B price: 3.90 quantity: 300 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: NH firmDesignatedID: C0001D accountHolderType: A affiliateFlag: false aggregatedOrders: openCloseIndicator: Open representativeInd: O	The *representativeInd* field must be populated with a value of 'O' to indicate that the order is an Options Combined Order. The *aggregatedOrders* field is not required to be populated until phase 2d.
8	Broker 1 routes the combined order to an Options Exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000	In Phase 2d, BRKR1 will be required to populate the *handlingInstructions* field with a value of "NH" on its Option Order Route event.

#	Step	Reported Event	Comments
		orderID: O10990 optionID: XYZ 180906C00001875 eventTimestamp: 20180516T135610.2250 senderIMID: BRKR1 destination: EXCH1 destinationType: E routedOrderID: RT01111 session: sA2 side: B price: 3.90 quantity: 300 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: affiliateFlag: false exchOriginCode: C priorUnlinked:	
9	Exchange 1 accepts the order from Broker 1	*Exchange reports a **Participant Simple Option Order Accepted event***	
10	Exchange 1 executes the order	*Exchange reports a **Participant Simple Option Trade event***	
11	Broker 1 fills Customer 1's order	*Broker 1 reports an **Option Order Fulfillment** event* type: MOOF fillKeyDate: 20180516T000000 fulfillmentID: FB10434 optionID: XYZ 180906C00001875 eventTimestamp: 20180516T141510.1250 quantity: 60 price: 3.90 fulfillmentLinkType: O clientDetails: orderKeyDate: 20180516T000000 orderID: O10987 side: B	The *fulfillmentLinkType* field must be populated with a value of 'O' indicating that this is an Options Order Fulfillment. *firmDetails* are not required until phase 2d.
12	Broker 1 fills Customer 2's order	*Broker 1 reports an **Option Order Fulfillment** event* type: MOOF fillKeyDate: 20180516T000000	The *fulfillmentLinkType* field must be populated with a value of 'O' indicating that this is an Options Order Fulfillment. *firmDetails* are not required until phase 2d.

#	Step	Reported Event	Comments
		fulfillmentID: FB10435 optionID: XYZ 180906C00001875 eventTimestamp: 20180516T141510.1250 quantity: 150 price: 3.90 fulfillmentLinkType: O clientDetails: orderKeyDate: 20180516T000000 orderID: O10988 side: B	
13	Broker 1 fills Customer 3's order	*Broker 1 reports an **Option Order Fulfillment event*** type: MOOF fillKeyDate: 20180516T000000 fulfillmentID: FB10436 optionID: XYZ 180906C00001875 eventTimestamp: 20180516T141510.1250 quantity: 90 price: 3.90 fulfillmentLinkType: O clientDetails: orderKeyDate: 20180516T000000 orderID: O10989 side: B	The *fulfillmentLinkType* field must be populated with a value of 'O' indicating that this is an Options Order Fulfillment. *firmDetails* are not required until phase 2d.

3.3. Option Order Modification Scenarios

This section illustrates CAT reporting requirements for single -leg option order modification scenarios in Phase 2b. In addition to the scenarios provided below, please refer to Equity Event Ssection 2.52.5. This guidance also applies to single leg electronic option order reporting. Refer to Section 5.8 of the CAT Reporting Technical Specifications for Industry Members for additional information.

3.3.1. Customer Initiates the Modification of an Option Order that was Previously Routed to an Exchange

This scenario illustrates a customer -initiated modification (electronically) of an option order which the Industry Member had previously routed to an exchange.
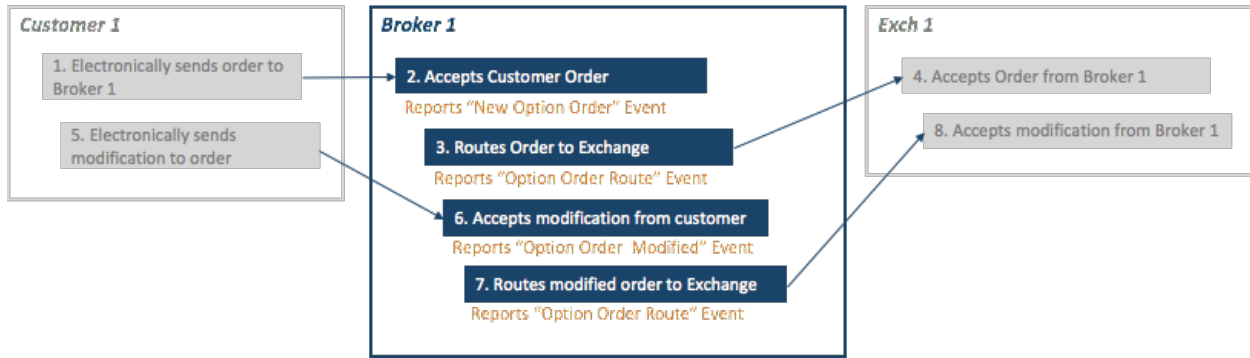
Industry Member Broker 1 is required to report:

- The electronic receipt of the customer order (New Option Order event)
- The route of the order to the exchange (Option Order Route event)
- The electronic receipt of the customer modification (Option Order Modified event)
- The route of the modification to the exchange (Option Order Route event)

#	Step	Reported Event	Comments
1	Customer electronically sends the option order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20180516T000000 orderID: OPA1740 optionID: XYZ 180906C00001905 eventTimestamp: 20180516T133031.1234 deptType: A side: B price: 10.5 quantity: 50 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: NH|STP firmDesignatedID: C0001 accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	
3	Broker 1 routes the order to Exchange 1	*Broker 1 reports an **Option Order Route event***	In Phase 2d, FIRM1 will be required to populate the *handlingInstructions*

#	Step	Reported Event	Comments
		type: MOOR eventTimestamp: 20180516T133031.1434 optionID: XYZ 180906C00001905 senderIMID: FIRM1 destination: EXCH1 destinationType: E orderID: OPA1740 routedOrderID: RTID201 session: s2r1 side: B price: 10.5 quantity: 50 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: affiliateFlag: false exchOriginCode: C openCloseIndicator: Open	field with a value of "NH" and "STP" on its Option Order Route event.
4	Exchange 1 accepts the order from Broker 1	*Exchange reports a Participant **Simple Option Order Accepted event***	
5	Customer electronically modifies the order	*NA*	
6	Broker 1 modifies the order per the customer's instructions	*Broker 1 reports an **Option Order Modified event*** type: MOOM orderKeyDate: 20180516T000000 orderID: OPB1740 optionID: XYZ 180906C00001905 priorOrderKeyDate: 20180516T000000 priorOrderID: OPA1740 eventTimestamp: 20180516T133031.1484 initiator: C side: B price: 10 quantity: 50 leavesQty: 50 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: NH|STP openCloseIndicator: Open	Upon receipt of the modification, Broker 1 assigns a new Order Key with *orderID* OPB1740. The Prior Order Key with *orderID* OPA1740 must be populated in the *priorOrderID* field. The Prior Order Key links the Option Order Modified event with the New Option Order event.

#	Step	Reported Event	Comments
		representativeInd: N	
7	Broker 1 routes the modification to Exchange 1	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: OPB1740 optionID: XYZ 180906C00001905 eventTimestamp: 20180516T133031.1500 senderIMID: FIRM1 destination: EXCH1 destinationType: E routedOrderID: RTID567 session: s2r1 side: B price: 10 quantity: 50 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: affiliateFlag: false exchOriginCode: C openCloseIndicator: Open	In Phase 2d, FIRM1 will be required to populate the *handlingInstructions* field with a value of "NH" and "STP" on its Option Order Route event.
8	Exchange 1 updates the order	*Exchange reports a Participant **Option Order Modified event***	

3.4.   Cancellation Scenarios

Option Order Cancelled events follow the same guidance as Order Cancelled events for equities. In addition to the scenarios provided below, refer to Equity Event Section 2.6~~2.6~~. The guidance also applies to single leg electronic option order reporting. Refer to Section 5.9 of the CAT Reporting Technical Specifications for Industry Members for additional information.

3.5.   Internal Route Scenarios

This section illustrates the CAT reporting requirements when an order is passed to a different department or desk within a *CATReporterIMID*. Refer to Section 5.6 of the CAT Reporting Technical Specifications for Industry Members for additional information.

3.5.1. Customer Option Order Internally Routed Electronically

This scenario illustrates the CAT reporting requirements when an Industry Member internally routes a customer order from the Sales Desk to the Trading Desk.

Industry Member Broker 1 is required to report:

- · The electronic receipt of the customer order (New Option Order event)
- · The internal route of the order from the Sales Desk to the Trading Desk (Option Order Internal Route Accepted event)
- · The route of the order to the exchange (Option Order Route event)

#	Step	Reported Event	Comments
1	Customer electronically sends an option order to Broker 1	*NA*	
2	Broker 1 accepts the customer order at the Sales Desk	*Broker 1 reports a* **New Option Order event** type: MONO orderKeyDate: 20180516T000000 orderID: OS3456 optionID: XYZ 190215C00002150 eventTimestamp: 20180516T133031.1234 deptType: A side: B price: 6.60 quantity: 20 minQty: 10 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: STP firmDesignatedID: CUS98765 accountHolderType: A affiliateFlag: false openCloseIndicator: Close representativeInd: N	

#	Step	Reported Event	Comments
3	Trading Desk accepts the internal route of the order from the Sales Desk	*Broker 1 reports an **Option Order Internal Route Accepted event*** type: MOIR orderKeyDate: 20180516T000000 orderID: OT5459 optionID: XYZ 190215C00002150 parentOrderKeyDate: 20180516T000000 parentOrderID: OS3456 eventTimestamp: 20180516T133031.1254 deptType: T receivingDeskType: T side: B price: 6.60 quantity: 20 minQty: 10 orderType: LMT handlingInstructions: STP openCloseIndicator: Open	The Trading Desk, upon receipt of the internal route, assigns a new Order Key with *orderID* OT5459. The Parent Order Key with *orderID* OS3456 must be populated in the *parentOrderID* field. The Parent Order Key links the Option Order Internal Route Accepted event with the New Option Order event. The *openCloseIndicator* changes from "Close" to "Open". At the time of order origination, the customer was short, but at the point of time the order is received by the Trading Desk, the customer's position was flat.
4	The Trading Desk electronically routes the order to the Exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: OT5459 optionID: XYZ 190215C00002150 eventTimestamp: 20180516T133031.3789 senderIMID: BRKR01 destination: OPEXCH1 destinationType: E routedOrderID: RT5309 session: s5 side: B price: 6.60 quantity: 20 minQty: 10 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: affiliateFlag: false exchOriginCode: C openCloseIndicator: Open	In Phase 2d, BRKR01 will be required to populate the *handlingInstructions* field with a value of "STP" on its Option Order Route event.

#	Step	Reported Event	Comments
5	Exchange 1 accepts order from Broker 1	*Exchange reports a Participant* ***Simple Option Order Accepted event***	
6	Exchange 1 executes the order	*Exchange reports a Participant* ***Simple Option Trade event***	

3.5.2. Order is Routed Internally and Child Orders are Generated Prior to Routing

This scenario illustrates the CAT reporting requirements when an Industry Member routes an order internally from the Sales Desk to the Trading Desk, and the Trading Desk generates child orders. The child orders are then routed to exchanges for execution.
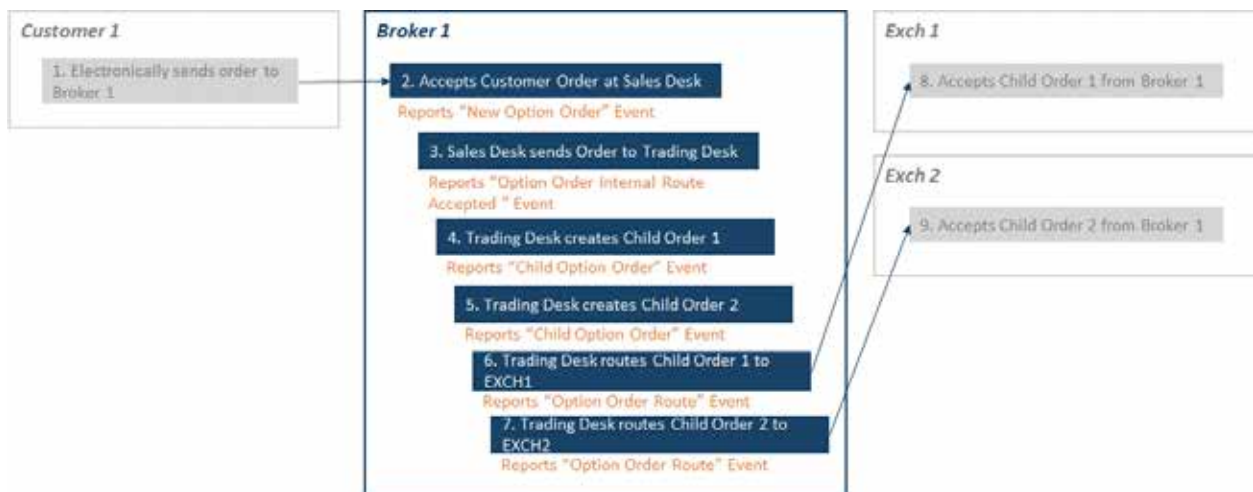
Industry Member Broker 1 is required to report:

- · The electronic receipt of the customer order (New Option Order event)
- · The internal route of the order from the Sales Desk to the Trading Desk (Option Order Internal Route Accepted event)
- · The generation of child orders by the Trading Desk (Child Option Order events)
- · The route of each child order to an exchange (Option Order Route events)

#	Step	Reported Event	Comments
1	Customer electronically sends the option order to Broker 1	*NA*	
2	Broker 1 accepts customer order at the Sales Desk	*Broker 1 reports a* ***New Option Order event*** type: MONO orderKeyDate: 20180516T000000	

#	Step	Reported Event	Comments
		orderID: OS10001 optionID: XYZ 190215C00002150 eventTimestamp: 20180516T133031.1234 deptType: A side: B price: 8.5 quantity: 10 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: STP firmDesignatedID: CUS234 accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	
3	Trading Desk accepts the internal route of the order from the Sales Desk	*Broker 1 reports an **Option Order Internal Route Accepted event*** type: MOIR orderKeyDate: 20180516T000000 orderID: OT56789 optionID: XYZ 190215C00002150 parentOrderKeyDate: parentOrderID: OS10001 eventTimestamp: 20180516T133031.1254 deptType: T receivingDeskType: T side: B price: 8.5 quantity: 10 orderType: LMT handlingInstructions: STP openCloseIndicator: Open	The Trading Desk, upon receipt of the internal route, assigns a new Order Key with *orderID* OT56789. The Parent Order Key with *orderID* OS10001 must be populated in the *parentOrderID* field. The Parent Order Key links the Option Order Internal Route Accepted event with the New Option Order event.
4	Trading Desk creates Child Order 1	*Broker 1 reports a **Child Option Order event (1 of 2)*** type: MOCO orderKeyDate: 20180516T000000 orderID: CO111 optionID: XYZ 190215C00002150 parentOrderKeyDate: 20180516T000000 parentOrderID: OT56789	Upon generation of the child order, Broker 1 assigns a new Order Key with *orderID* CO111. The Parent Order Key with *orderID* OT56789 must be populated in the *parentOrderID* field. The Parent Order Key links the Child Order event with the New Order event.

#	Step	Reported Event	Comments
		eventTimestamp: 20180516T133031.1260 side: B price: 8.5 quantity: 7 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: STP openCloseIndicator: Open	
5	Trading Desk creates Child Order 2	*Broker 1 reports a **Child Option Order event (2 of 2)*** type: MOCO orderKeyDate: 20180516T000000 orderID: CO222 optionID: XYZ 190215C00002150 parentOrderKeyDate: 20180516T000000 parentOrderID: OT56789 eventTimestamp: 20180516T133031.1261 side: B price: 8.5 quantity: 3 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: STP openCloseIndicator: Open	Upon generation of the child order, Broker 1 assigns a new Order Key with *orderID* CO222. The Parent Order Key with *orderID* OT56789 must be populated in the *parentOrderID* field. The Parent Order Key links the Child Order event with the New Order event.
6	Trading Desk routes Child Order 1 to EXCH 1	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: CO111 optionID: XYZ 190215C00002150 eventTimestamp: 20180516T133031.1360 senderIMID: BRKR01 destination: OPEXCH1 destinationType: E routedOrderID: RT432 session: s101 side: B price: 8.5	In Phase 2d, BRKR01 will be required to populate the *handlingInstructions* field with a value of "STP" on its Option Order Route event.

#	Step	Reported Event	Comments
		quantity: 7 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: affiliateFlag: false exchOriginCode: C openCloseIndicator: Open	
7	Trading Desk routes Child Order 2 to EXCH 2	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: CO222 optionID: XYZ 190215C00002150 eventTimestamp: 20180516T133031.1365 senderIMID: BRKR01 destination: OPEXCH2 destinationType: E routedOrderID: RT369 session: s5 side: B price: 8.5 quantity: 3 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: affiliateFlag: false exchOriginCode: C openCloseIndicator: Open	In Phase 2d, BRKR01 will be required to populate the *handlingInstructions* field with a value of "STP" on its Option Order Route event.
8	EXCH1 accepts the order from Broker 1	*Exchange 1 reports a Participant **Simple Option Order Accepted event***	
9	EXCH2 accepts the order from Broker 1	*Exchange 2 reports a Participant **Simple Option Order Accepted event***	

3.6.   Complex Order Scenarios

This section illustrates the CAT reporting requirements when handling complex orders. Refer to Section 5 of the CAT Reporting Technical Specifications for Industry Members and CAT FAQ K2 for additional information.

3.6.1. Industry Member Receives a Complex Option Order Which is worked as Individual Single Order Legs in the Customer's Account

This scenario illustrates Phase 2b reporting requirements when an Industry Member receives a complex option order from a customer, but routes the order to an exchange as single leg option orders directly from the customer's account without creating new single leg option orders.

Complex option orders are not reportable in Phase 2b, so the Industry Member is not required to report the receipt of the complex order from the customer. The Industry Member is required to report the route of the individual single order legs, as these represent simple electronic option orders, which are reportable in Phase 2b.

Industry Member Broker 1 is required to report:

· The route of each single leg option order to the exchange (Option Order Route event)

The Industry Member must populate the *priorUnlinked* field with a value of 'C' in its Option Order Route event to indicate that the immediate preceding step was reported since it was a complex order.

#	Step	Reported Event	Comments
1	Customer sends a complex option order to Broker 1	*NA*	Complex options out of scope for Phase 2b
2	Broker 1 accepts the complex option order	*NA*	Complex options out of scope for Phase 2b
3	Broker 1 routes Order A to Exchange 1	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: OA1234 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133031.1254 senderIMID: BKRF1 destination: EXCH1 destinationType: E routedOrderID: RTOA1	In phase 2b, the *priorUnlinked* field must be populated with a value of 'C' to indicate the immediately preceding event is not reportable, as it is a complex option. In phase 2d, the *handlingInstructions* field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order. The orderKeyDate is the date and time that the Order Key was assigned.

#	Step	Reported Event	Comments
		session: s.012.5 side: B price: 10 quantity: 50 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: exchOriginCode: P affiliateFlag: false openCloseIndicator: Open priorUnlinked: C	
4	Broker 1 routes Order B to Exchange 1	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: OB1234 optionID: XYZ 180810P00001925 eventTimestamp: 20180516T133031.21235 senderIMID: BKRF1 destination: EXCH2 destinationType: E routedOrderID: RTOB1 session: s.012.6 side: B price: 10.5 quantity: 50 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: exchOriginCode: P affiliateFlag: false openCloseIndicator: Open priorUnlinked: C	In phase 2b, the *priorUnlinked* field must be populated with a value of 'C' to indicate the immediately preceding event is not reportable, as it is a complex option. In phase 2d, the *handlingInstructions* field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order. The orderKeyDate is the date and time that the *orderID* was assigned.
5	Exchange 1 accepts Order A and Order B from Broker 1	*Exchange 1 reports a Participant **Simple Option Order Accepted event***	
6	Exchange 1 executes the option orders	*Exchange 1 reports a Participant **Simple Option Trade event***	

3.6.2. Industry Member Manually Receives a Complex Option Order Followed by Multiple Single Leg Electronic Option Orders

This scenario illustrates the Phase 2b reporting requirements when an Industry Member manually receives a complex option order from a customer, and the customer also sends the order as single leg electronic messages due to system limitations. The Industry Member routes the order to an exchange as a complex order.

In Phase 2b, the entirety of the customer order is not reportable to CAT, as the customer intended the order to be handled as a complex order. In Phase 2b, the preferred approach is that the Industry Member does not report the electronic single leg orders, as complex orders are not in scope. However, ~~I~~industry ~~M~~members may be unable to suppress these events from CAT in Phase 2b. This scenario illustrates reporting requirements if the Industry Member is unable to suppress the single leg orders.
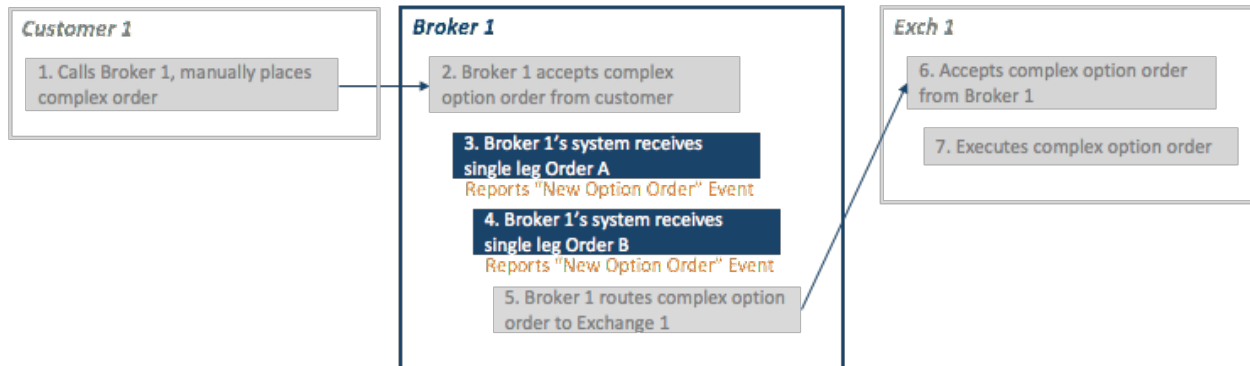
Industry Member Broker 1 is required to report:

· The receipt of the electronic single leg orders (New Option Order events)

If the Industry Member elects to report the single legs, the *handlingInstructions* field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order, and the *nextUnlinked* flag must be populated with a value of 'C' to indicate that the immediately ~~preceding~~ following event is not reportable in Phase 2b, as it is a complex order event. Alternatively, if the *nextUnlinked* value is unknown at the time of order receipt, a separate New Option Order Supplement event may be reported to capture the *nextUnlinked* value.

#	Step	Reported Event	Comments
1	Customer calls in a complex option order to Broker 1	*NA*	Complex options out of scope for Phase 2b
2	Broker 1 accepts the complex option order	*NA*	Complex options out of scope for Phase 2b
3	Broker 1's system electronically captures single leg option order A	*Broker 1 reports a **New Option Order event***	The *nextUnlinked* flag must be populated with a value of 'C' to indicate that the immediately

#	Step	Reported Event	Comments
		type: MONO orderKeyDate: 20180516T000000 orderID: OA1234 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133031.1234 deptType: A side: B price: 10 quantity: 50 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX firmDesignatedID: FD0012 accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N nextUnlinked: C	following event is not reportable, as is it is a complex option. Alternatively, if the *nextUnlinked* value is unknown at the time of order receipt, a separate New Option Order Supplement event may be reported to capture the *nextUnlinked* value. The *handlingInstructions* field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order.
4	Broker 1's system electronically captures single leg option order B	*Broker 1 reports a* **New Option Order event** type: MONO orderKeyDate: 20180516T000000 orderID: OB1234 optionID: XYZ 180810P00001925 eventTimestamp: 20180516T133031.1235 deptType: A side: B price: 10.5 quantity: 50 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX firmDesignatedID: FD0012 accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N nextUnlinked: C	The *nextUnlinked* flag must be populated with a value of 'C' to indicate that the immediately following event is not reportable, as is it is a complex option. Alternatively, if the *nextUnlinked* value is unknown at the time of order receipt, a separate New Option Order Supplement event may be reported to capture the *nextUnlinked* value. The *handlingInstructions* field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order.
5	Broker 1 routes complex order to Exchange 1	*NA*	Complex options out of scope for Phase 2b

#	Step	Reported Event	Comments
6	Exchange 1 accepts complex option order from Broker 1	*Exchange 1 reports a Participant **Complex Option Order Accepted event***	
7	Exchange 1 executes complex option order	*Exchange 1 reports a Participant **Complex Option Trade event***	

3.6.3. Industry Member Manually Routes a Complex Option Order to another Industry Member Followed by Multiple Single Leg Electronic Option Orders

This scenario illustrates the Phase 2b reporting requirements when an Industry Member manually routes a complex option order to another Industry Member and also sends the order as single leg electronic messages due to system limitations. The order is then routed to an exchange as a complex order.

In Phase 2b, the entirety of the customer order is not reportable to CAT, as the customer intended the order to be handled as a complex order. In Phase 2b, the preferred approach is that the Industry Member does not report the electronic single leg orders, as complex orders are not in scope. However, iIndustry Mmembers may be unable to suppress these events from CAT in Phase 2b. This scenario illustrates reporting requirements if the Industry Members are unable to suppress the single leg orders.
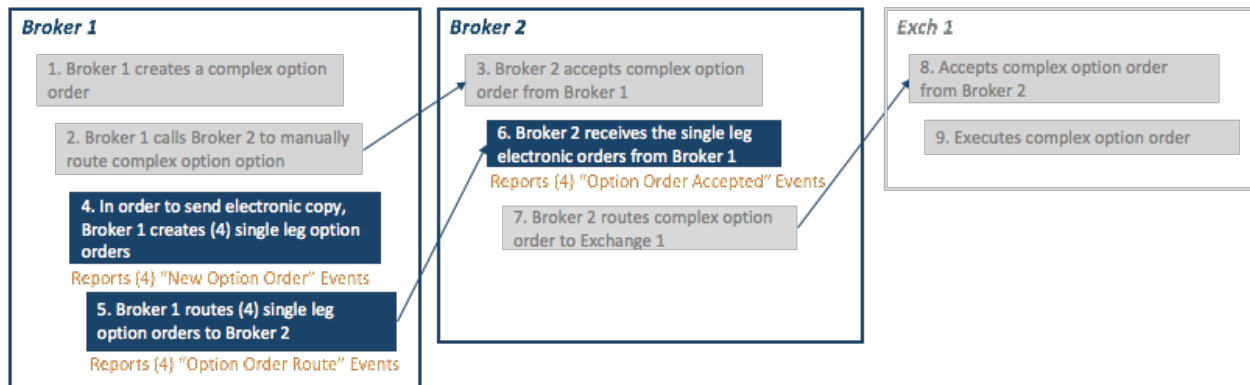
Industry Member Broker 1 is required to report:

· The originationreceipt of the electronic single leg orders (New Option Order events)
· The route of the single leg orders to Broker 2 (Option Order Route Events)

Industry Member Broker 2 is required to report:

· The receipt of the electronic routes received from Broker 1 (Option Order Accepted events)

If the Industry Member elects to report the single legs, the *handlingInstructions* field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order, and the *nextUnlinked* flag must be populated with a value of 'C' to indicate that the immediately ~~preceding~~ following event is not reportable in Phase 2b, as it is a complex order event. Alternatively, if the *nextUnlinked* value is unknown

at the time of order receipt, a separate New Option Order Supplement event may be reported to capture the *nextUnlinked* value.

#	Step	Reported Event	Comments
1	Broker 1 creates a complex option order	*NA*	Complex options out of scope for Phase 2b
2	Broker 1 calls Broker 2 to manually route the complex option order	*NA*	Complex options out of scope for Phase 2b Manual order events out of scope for Phase 2b
3	Broker 2 accepts complex option order	*NA*	Complex options out of scope for Phase 2b Manual order events out of scope for Phase 2b
4	Broker 1 creates four single leg option orders	*Broker 1 reports a* **New Option Order event (1 of 4)** type: MONO orderKeyDate: 20180516T000000 orderID: O12345 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133031.1234 deptType: A side: B price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX firmDesignatedID: PROP203 AccountHolderType: P affiliateFlag: false openCloseIndicator: Open representativeInd: N *Broker 1 reports a* **New Option Order event (2 of 4)** type: MONO orderKeyDate: 20180516T000000 orderID: O22345 optionID: XYZ 180810P00001925 eventTimestamp: 20180516T133031.1235 deptType: A side: B	The *handlingInstructions* field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order.

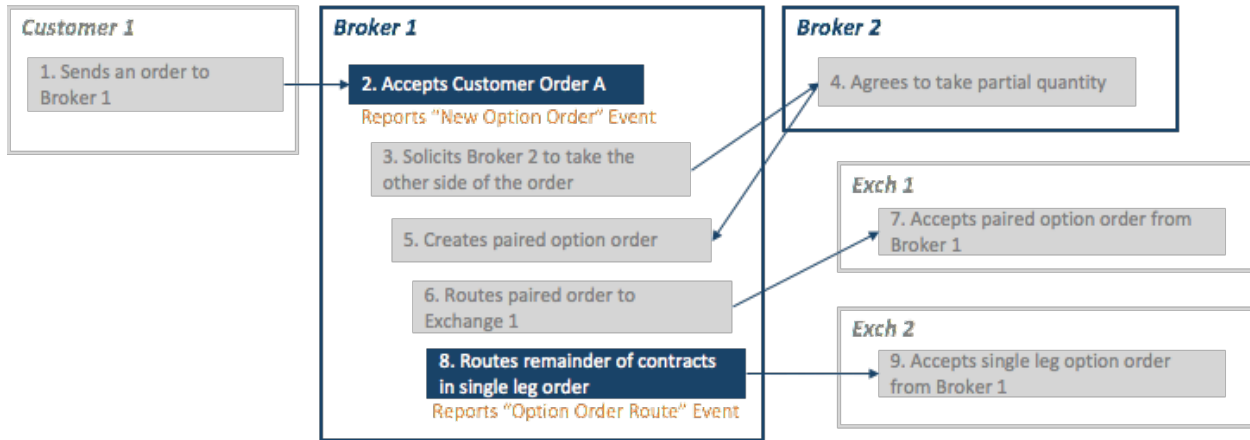| #	Step	Reported Event	Comments
		price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX firmDesignatedID: PROP203 accountHolderType: P affiliateFlag: false openCloseIndicator: Open representativeInd: N	
4	(cont'd)	*Broker 1 reports a **New Option Order event (3 of 4)*** type: MONO orderKeyDate: 20180516T000000 orderID: O32345 optionID: XYZ 181210C00001925 eventTimestamp: 20180516T133031.1236 deptType: A side: B price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX firmDesignatedID: PROP203 accountHolderType: P affiliateFlag: false openCloseIndicator: Open representativeInd: N *Broker 1 reports a **New Option Order event (4 of 4)*** type: MONO orderKeyDate: 20180516T000000 orderID: O42345 optionID: XYZ 181210P00001925 eventTimestamp: 20180516T133031.1237 deptType: A side: B price: 10 quantity: 20	

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX firmDesignatedID: PROP203 accountHolderType: P affiliateFlag: false openCloseIndicator: Open representativeInd: N	
5	Broker 1 routes the electronic single leg orders to Broker 2	*Broker 1 reports an **Option Order Route event (1 of 4)*** type: MOOR orderKeyDate: 20180516T000000 orderID: O12345 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133031.5234 senderIMID: BKRF1 destination: BKRK_2 destinationType: F routedOrderID: RTOA111 side: B price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX affiliateFlag: false openCloseIndicator: Open nextUnlinked: C *Broker 1 reports an **Option Order Route event (2 of 4)*** type: MOOR orderKeyDate: 20180516T000000 orderID: O22345 optionID: XYZ 180810P00001925 eventTimestamp: 20180516T133031.5235 senderIMID: BKRF1 destination: BKRK_2 destinationType: F routedOrderID: RTOA222 side: B	In Phase 2b, the *nextUnlinked* flag must be populated with a value of 'C' to indicate that the immediately following event is not reportable, as is it is a complex option. The *handlingInstructions* field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order.

#	Step	Reported Event	Comments
		price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX affiliateFlag: false openCloseIndicator: Open nextUnlinked: C	
5	(cont'd)	*Broker 1 reports an **Option Order Route event (3 of 4)*** type: MOOR orderKeyDate: 20180516T000000 orderID: O32345 optionID: XYZ 181210C00001925 eventTimestamp: 20180516T133031.5236 senderIMID: BKRF1 destination: BKRK_2 destinationType: F routedOrderID: RTOA333 side: B price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX affiliateFlag: false openCloseIndicator: Open nextUnlinked: C *Broker 1 reports an **Option Order Route event (4 of 4)*** type: MOOR orderKeyDate: 20180516T000000 orderID: O42345 optionID: XYZ 181210P00001925 eventTimestamp: 20180516T133031.5237 senderIMID: BKRF1 destination: BKRK_2 destinationType: F routedOrderID: RTOA444 side: B	

#	Step	Reported Event	Comments
		price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX affiliateFlag: false openCloseIndicator: Open nextUnlinked: C	
6	Broker 2 accepts the electronic single leg option orders from Broker 1	*Broker 2 reports an **Option Order Accepted event (1 of 4)*** type: MOOA orderKeyDate: 20180516T000000 orderID: O10987 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133031.5434 receiverIMID: BRKR_2 senderIMID: BKRF1 senderType: F routedOrderID: RTOA111 deptType: A side: B price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX affiliateFlag: false openCloseIndicator: Open priorUnlinked: C nextUnlinked: C *Broker 2 reports an **Option Order Accepted event (2 of 4)*** type: MOOA orderKeyDate: 20180516T000000 orderID: O20987 optionID: XYZ 180810P00001925 eventTimestamp: 20180516T133031.5435 receiverIMID: BRKR_2 senderIMID: BKRF1 senderType: F	In phase 2b, the *priorUnlinked* field must be populated with a value of 'C' to indicate the immediately preceding event is not reportable, as it is a complex option. In Phase 2b, the *nextUnlinked* flag must be populated with a value of 'C' to indicate that the immediately following event is not reportable, as is it is a complex option. The *handlingInstructions* field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order.

#	Step	Reported Event	Comments
		routedOrderID: RTOA222 deptType: A side: B price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX affiliateFlag: false openCloseIndicator: Open priorUnlinked: C nextUnlinked: C	
6	(cont'd)	*Broker 2 reports an O**ption Order Accepted event (3 of 4)*** type: MOOA orderKeyDate: 20180516T000000 orderID: O30987 optionID: XYZ 181210C00001925 eventTimestamp: 20180516T133031.5436 receiverIMID: BRKR_2 senderIMID: BKRF1 senderType: F routedOrderID: RTOA333 deptType: A side: B price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX affiliateFlag: false openCloseIndicator: Open priorUnlinked: C nextUnlinked: C *Broker 2 reports an **Option Order Accepted event (4 of 4)*** type: MOOA orderKeyDate: 20180516T000000 orderID: O40987 optionID: XYZ 181210P00001925	

#	Step	Reported Event	Comments
		eventTimestamp: 20180516T133031.5437 receiverIMID: BRKR_2 senderIMID: BKRF1 senderType: F routedOrderID: RTOA444 deptType: A side: B price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX affiliateFlag: false openCloseIndicator: Open priorUnlinked: C nextUnlinked: C	
7	Broker 2 routes the complex option orders to Exchange 1	*NA*	Complex options out of scope for Phase 2b
8	Exchange 1 accepts the order from Broker 2	*Exchange 1 reports a Participant **Complex Option Order Accepted event***	
9	Exchange 1 executes the complex option order	*Exchange 1 reports a Participant **Complex Option Trade event***	

3.7.   Additional Options Reporting Scenarios

3.7.1.   Industry Member Receives a Customer Order and is Only Able to Pair a Portion of the Order

This scenario illustrates the CAT reporting requirements when an Industry Member electronically receives a single leg order from a customer and solicits another Industry Member to pair the order, but is left with a partial quantity of the single leg customer order. Only the single leg components of the lifecycle are required for CAT reporting in Phase 2b, as paired option orders are not required until Phase 2d. Refer to CAT FAQ K2 for additional information.

Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Option Order event)
- The route of the un-paired quantity of the single leg order to an exchange (Option Order Route event)

#	Step	Reported Event	Comments
1	Customer electronically sends option order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20180516T000000 orderID: OA76543 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133031.1234 deptType: A side: B price: 8.5 quantity: 100 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG firmDesignatedID: CUS458 accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	The *nextUnlinked* field must **not** be populated, as part of the order is still being worked as single leg orders that are eligible for linkage.
3	Broker 1 solicits Broker 2 to take other side of order	*NA*	

#	Step	Reported Event	Comments
4	Broker 2 agrees to 60 contracts	*NA*	
5	Broker 1 creates a paired option order for 60 contracts	*NA*	Paired option orders are not reportable until Phase 2d
6	Broker 1 routes the paired option order to the exchange	*NA*	Paired option orders are not reportable until Phase 2d
7	Exchange 1 accepts the paired option order from Broker 1	*Exchange 1 reports two Participant* ***Simple Option Order Accepted events***	
8	Broker 1 routes a single leg option order to the exchange	*Broker 1 reports an* ***Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: OA76543 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133032.1234 senderIMID: BROKER1 destination: EXCH2 destinationType: E routedOrderID: RT7171 session: s9 side: B price: 8.5 quantity: 40 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open	
9	Exchange 2 accepts the single leg order from Broker 1	*Exchange 2~~1~~ reports a Participant* ***Single Option Order Accepted event***	

3.7.2. Response to an Exchange Auction

This scenario illustrates the CAT reporting requirements when an Industry Member originates a proprietary option order in response to an Exchange Auction of a simple option or paired order of simple options. Refer to CAT FAQ K3 for additional information.
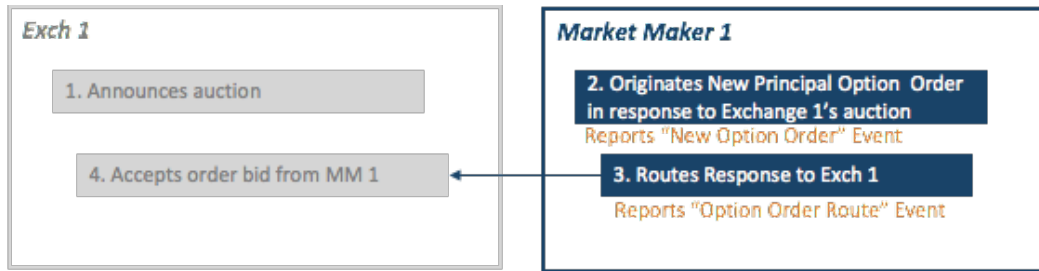
Industry Member Market Maker 1 is required to report:

- The origination of the proprietary order (New Option Order event)
- The response to the exchange auction (Option Order Route event)

The Industry Member is required to report the auction details in the *handlingInstructions* field using the name/value pair 'AucResp', which must be paired with the AuctionID value.

#	Step	Reported Event	Comments
1	Exchange 1 announces auction	*NA*	
2	Market Maker 1 originates a prop option order in response to the auction	*Market Maker 1 reports a **New Option Order Event*** type: MONO orderKeyDate: 20180516T000000 orderID: OA76543 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133031.1234 deptType: T side: B price: 5 quantity: 10 orderType: LMT timeInForce: IOC tradingSession: REG handlingInstructions: AucResp=1a95|FOK firmDesignatedID: P999 accountHolderType: P affiliateFlag: false openCloseIndicator: Open representativeInd: N	Orders originated in response to an auction must have the *handlingInstructions* field populated with a value of 'AucResp', which is a Name/Value pair requiring the Auction ID value.
3	Market Maker 1 routes response to Exchange 1	*Market Maker 1 reports an **Option Order Route event*** type: MOOR	In phase 2c, since the values in the *handlingInstructions* field have not changed from the New Order to the Order Route, ~~BRKA~~ MMFIRM1 may populate "RAR" in the

#	Step	Reported Event	Comments
		orderKeyDate: 20180516T000000 orderID: OA76543 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133031.1834 senderIMID: MMFIRM1 destination: EXCH1 destinationType: E routedOrderID: RTBID01 session: s12 side: B price: 5 quantity: 10 orderType: LMT timeInForce: IOC tradingSession: REG handlingInstructions: affiliateFlag: false exchOriginCode: M openCloseIndicator: Open	*handlingInstructions* field indicating the order was "routed as received". Alternatively, firms have the option to re-state all *handlingInstructions* values.
4	Exchange 1 accepts the order bid from Market Maker 1	*Exchange 1 reports a Participant* **Simple Option Order Accepted event**	

4. Error Account Scenarios

This section illustrates reporting requirements for reporting bona fide errors and activity occurring in an error account. These scenarios are applicable to equivalent equities and options order flows.

4.1.1. Industry Member Purchases the Wrong Security for a Customer/Client in Error

This scenario illustrates the CAT reporting requirements when an Industry Member receives a customer/client order and purchases the wrong security in error. In this scenario, the customer/client places an order to buy 100 shares of XYZ over the phone, and in error, the Industry Member enters an order to buy 100 shares of ABC.

Once the Industry Member realizes the error, it moves 100 shares of ABC from the customer's/client's account to its error account, and executes the customer/client order for 100 shares of XYZ out of its error account at the price the stock was trading when the customer/client originally placed the order.

The Industry Member then purchases 100 shares of XYZ on an exchange for its error account to cover the shares sold to the customer/client, and sells the 100 shares of ABC purchased in error on an exchange from its error account.
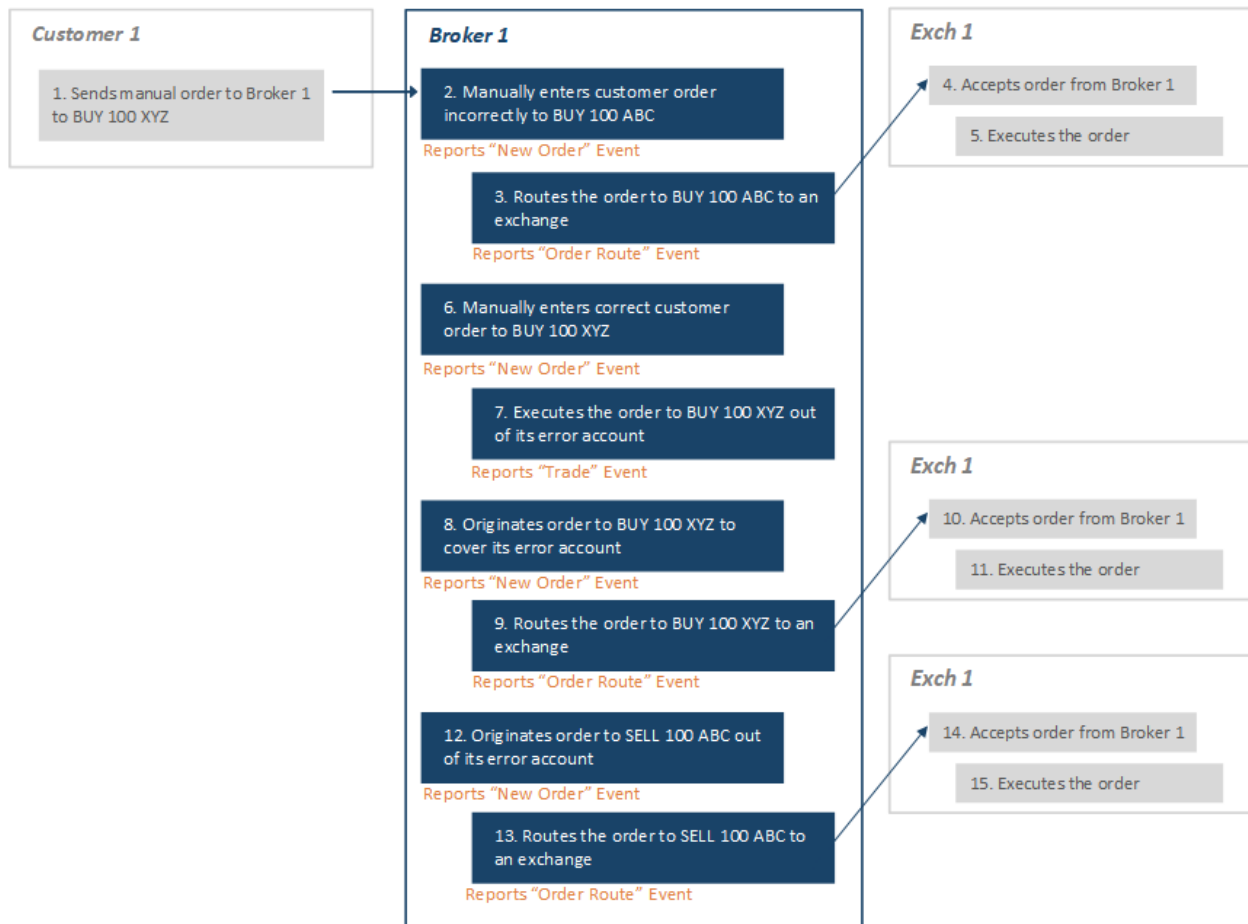
When the firm places an order in error for symbol ABC, Industry Member Broker 1 is required to report:

- · The entry of the customer/client order to buy the wrong security ABC (New Order event)
- · The route of the order to buy ABC to an exchange (Order Route event)

When the firm realizes and corrects the error, Industry Member Broker 1 is required to report:

- · The entry of the customer/client order to buy the correct security XYZ (New Order event)
- · The fill of the customer/client order for symbol XYZ from the firm's error account (Trade event)

- · The origination of an order to buy XYZ to cover the firm's error account (New Order event)
- · The route of the buy order for XYZ to an exchange (Order Route event)

- · The origination of an order to sell the shares of ABC purchased in error (New Order event)
- · The route of the sell order for ABC to an exchange (Order Route event)

The movement of the shares from the customer/client account to the error account is not reportable to CAT, as internal security movements and journal entries are not reportable to CAT.

#	Step	Reported Event	Comments
1	Customer/client manually routes an order to Broker 1 to buy 100 shares of XYZ		
2	Broker 1 enters an order to buy the wrong security	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: ABC1234 symbol: ABC eventTimestamp: 20180501T153035.634456 manualFlag: true electronicTimestamp: 20180501T153035.634456 deptType: T side: B price: 9.99 quantity: 100 orderType: LMT	

#	Step	Reported Event	Comments
		timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST001 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order in the incorrect security to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: ABC1234 symbol: ABC eventTimestamp: 20180501T153036.634456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: B price: 9.99 quantity: 100 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA	
4	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
5	Exch 1 executes the order	*Exch 1 reports a Participant **Trade event***	
6	Broker 1 realizes the error and moves the shares of ABC to its error account	*NA*	The movement of the shares from the customer/client account to the error account is not reportable to CAT, as internal security movements and journal entries are not reportable to CAT.
7	Broker 1 reports the receipt of the correct customer/client order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: XYZ1234 symbol: XYZ	

| #	Step	Reported Event	Comments
		eventTimestamp: 20180501T153035.634456 manualFlag: true electronicTimestamp: 20180501T153038.634456 deptType: T side: B price: 9.99 quantity: 100 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST001 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
8	Broker 1 satisfies the original customer/client order at the price that XYZ was trading when the customer/client originally placed the order	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180501T153038.634456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 100 price: 9.99 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180501T000000~~20180416T000000~~ orderID: XYZ1234 side: B sellDetails: side: SL firmDesignatedID: ERR123 accountHolderType: X	The *buyDetails* reflect the details of customer/client order XYZ1234. The *sellDetails* reflect the FDID of the firm's error account.
9	Broker 1 originates a Buy order for symbol XYZ to cover its error	*Broker 1 reports a **New Order event*** type: MENO	

#	Step	Reported Event	Comments
	account	orderKeyDate: 20180501T000000 orderID: XYZ5678 symbol: XYZ eventTimestamp: 20180501T153039.134456 manualFlag: false deptType: T side: B price: 9.99 quantity: 100 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ERR123 accountHolderType: X affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
10	Broker 1 routes the Buy- order to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: XYZ5678 symbol: XYZ eventTimestamp: 20180501T153039.134456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: B price: 9.99 quantity: 100 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA	
11	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
12	Exch 1 executes the order	*Exch 1 reports a Participant **Trade event***	

#	Step	Reported Event	Comments
13	Broker 1 originates an order in symbol ABC to sell the shares purchased in error.	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: ABC5678 symbol: ABC eventTimestamp: 20180501T153039.634456 manualFlag: false deptType: T side: SL price: 9.99 quantity: 100 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ERR123 accountHolderType: X affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
14	Broker 1 routes the Sell order to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: XYZ5678 symbol: XYZ eventTimestamp: 20180501T153039.134456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: AO1243 session: s5 side: SL price: 9.99 quantity: 100 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA	
15	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	

#	Step	Reported Event	Comments
16	Exch 1 executes the order	*Exch 1 reports a Participant* **Trade event**	

4.1.2. Customer/Client Places an Order in Error and the Industry Member Elects to Correct the Error as an Accommodation to the Customer/Client

This scenario illustrates the CAT reporting requirements when a customer/client places an order to purchase the wrong security, and the Industry Member elects to correct the error as an accommodation to the customer/client. In this scenario, the customer/client places on order to buy 100 shares of XYZ, which is immediately executed by the Industry Member.

The customer/client then informs the Industry Member that they intended to buy 100 shares of ABC, and the Industry Member agrees to correct the error as an accommodation to the customer/client. The Industry Member executes the customer/client order for 100 shares of ABC from a proprietary account, and takes the 100 shares of XYZ from the customer/client account into its error account. The Industry Member then sells 100 shares of XYZ from its error account on an exchange.
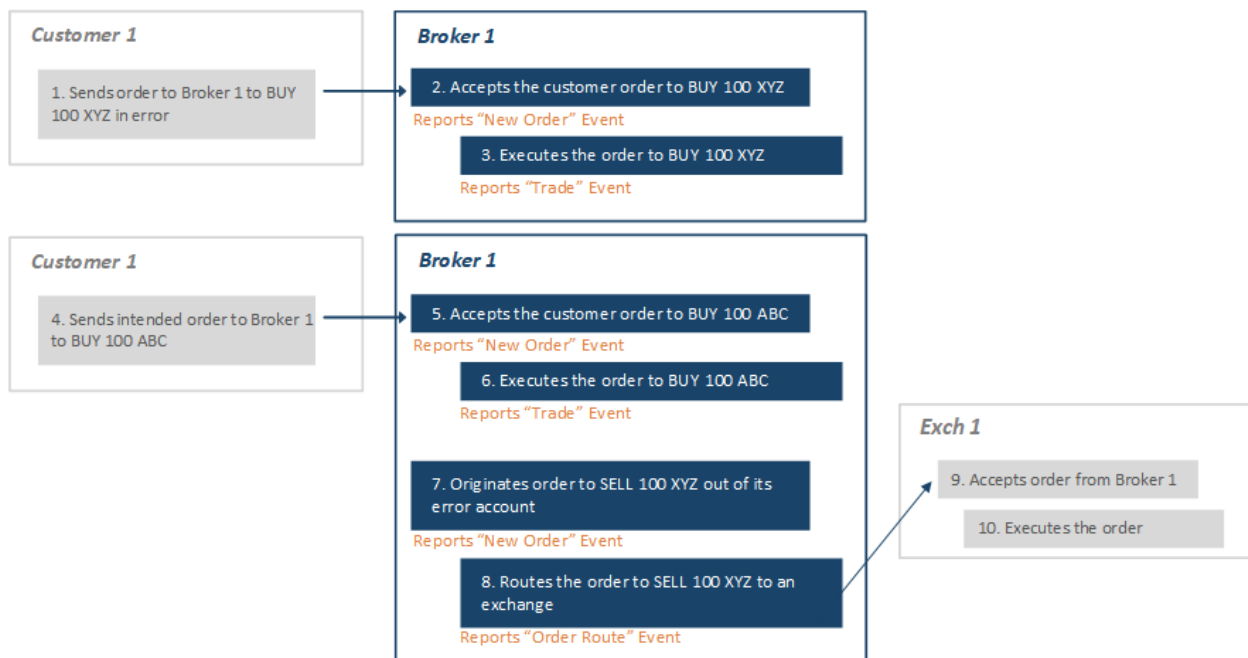
For symbol XYZ, Industry Member Broker 1 is required to report:

- The receipt of the customer/client buy order placed in error (New Order event)
- The execution of the customer/client buy order from a proprietary account (Trade event)

- The origination of an order to sell the shares out of the error account (New Order event)

- The route of the sell order to an exchange (Order Route event)

For symbol ABC, Industry Member Broker 1 is required to report:

- The receipt of the customer/client buy order in the correct security (New Order event)
- The execution of the customer/client buy order from a proprietary account (Trade event)

The movement of the shares from the customer/client account to the error account is not reportable to CAT, as internal security movements and journal entries are not reportable to CAT.

#	Step	Reported Event	Comments
1	Customer/client routes an order to Broker 1 to buy 100 shares of XYZ		
2	Broker 1 accepts the customer/client order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: XYZ1234 symbol: XYZ eventTimestamp: 20180501T153035.634456 manualFlag: false deptType: T side: B price: 9.99 quantity: 100 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST001 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 executes the customer/client order	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180501T153035.634456 manualFlag: false cancelFlag: false	The *buyDetails* reflect the details of customer/client order XYZ1234. The *sellDetails* reflect the FDID of the firm's proprietary account.

#	Step	Reported Event	Comments
		cancelTimestamp: quantity: 100 price: 9.99 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180416T000000 orderID: XYZ1234 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	
4	The customer/client informs Broker 1 of the error. Broker 1 takes the shares of XYZ into its error account	*NA*	The movement of the shares from the customer/client account to the error account is not reportable to CAT, as internal security movements and journal entries are not reportable to CAT.
5	Broker 1 accepts the customer/client order for symbol ABC	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: ABC1234 symbol: ABC eventTimestamp: 20180501T153037.634456 manualFlag: false deptType: T side: B price: 9.99 quantity: 100 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST001 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
6	Broker 1 executes the customer/client order	*Broker 1 reports a **Trade event*** type: MEOT	The *buyDetails* reflect the details of customer/client order ABC1234. The *sellDetails* reflect the FDID of the

| #	Step	Reported Event	Comments
		tradeKeyDate: 20180501T000000 tradeID: TABC555 symbol: ABC eventTimestamp: 20180501T153037.634456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 100 price: 9.99 capacity: P tapeTradeID: TRF124 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180416T000000 orderID: ABC1234 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	firm's proprietary account.
7	Broker 1 sells the shares of XYZ acquired from the customer	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: XYZ5678 symbol: XYZ eventTimestamp: 20180501T153038.634456 manualFlag: false deptType: T side: SL price: 9.99 quantity: 100 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ERR001 accountHolderType: X affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
8	Broker 1 routes the Sell order to an exchange	*Broker 1 reports an **Order Route event***	

#	Step	Reported Event	Comments
		type: MEOR orderKeyDate: 20180501T000000 orderID: XYZ5678 symbol: XYZ eventTimestamp: 20180501T153038.634456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: SL price: 9.99 quantity: 100 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA	
9	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted** event*	
10	Exch 1 executes the order	*Exch 1 reports a Participant **Trade event***	

4.1.3. Price Adjustment Through the Execution of a New Trade

This scenario illustrates the CAT reporting requirements when an Industry Member makes a price adjustment to a customer/client order by executing a new trade with the customer as principal. In this scenario, Industry Member Broker 1 receives a customer/client order to buy 1,000 shares of XYZ, and routes the order to Industry Member Broker 2 for execution at a price of 10.00 per share.

Industry Member Broker 1 determines that the customer/client should have received a price of 9.98 per share, and moves the 1,000 shares of XYZ executed at a price of 10.00 per share from the customer account to its error account. To effect the price adjustment to the customer, Industry Member Broker 1 sells the shares, as Principal, to the customer at 9.98 per share.
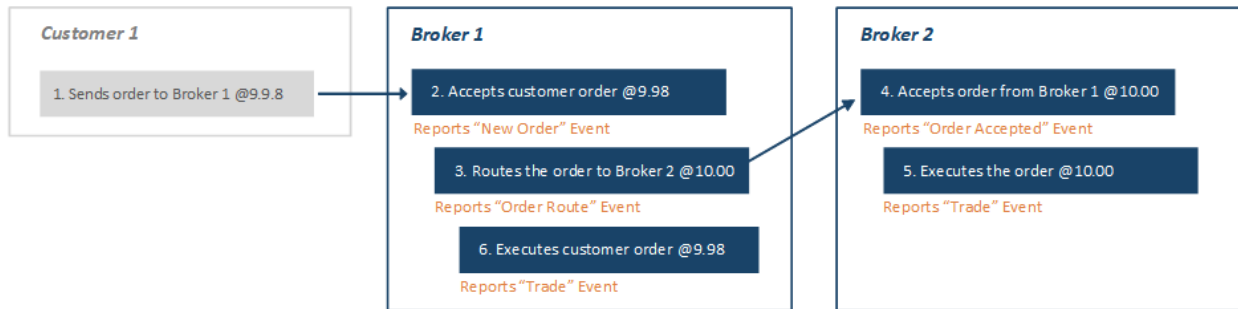
Industry Member Broker 1 is required to report:

·   The receipt of the customer/client order (New Order event)

·   The route of the order to Broker 2 (Order Route event)

·   The execution of the order from the firm's error account at a price of 9.98 (Trade event)

Industry Member Broker 2 is required to report:

·   The receipt of the order from Broker 1 (Order Accepted event)

·   The execution of the order at a price of 10.00 (Trade event)

The movement of the shares from the customer/client account to the error account is not reportable to CAT, as internal security movements and journal entries are not reportable to CAT.

#	Step	Reported Event	Comments
1	Customer/client routes an order to Broker 1 to Buy 1,000 shares of XYZ @9.98		
2	Broker 1 accepts the customer order	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180501T000000 orderID: XYZ1234 symbol: XYZ eventTimestamp: 20180501T153035.634456 manualFlag: false deptType: T side: B price: 9.98 quantity: 1,000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false	

#	Step	Reported Event	Comments
		firmDesignatedID: CUST001 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: XYZ1234 symbol: XYZ eventTimestamp: 20180501T153036.634456 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: AO123 session: side: B price: 10.00 quantity: 1,000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA	
4	Broker 2 accepts the order from Broker 1	Broker 2 reports an ***Order Accepted event*** type: MEOA orderKeyDate: 20180501T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180501T153036.634456 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: AO123 affiliateFlag: false deptType: A side: B price: 10.00	

#	Step	Reported Event	Comments
		quantity: 1,000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Broker 2 executes the trade @10.00	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180501T153038.634456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1,000 price: 10.00 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180416T000000 orderID: O34567 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	The *buyDetails* reflect the details of Broker 1's order O34567. The *sellDetails* reflect the FDID of Broker 2's prop account.
6	Broker 1 realizes the error and moves the shares of XYZ executed @10.00 to its error account	*NA*	The movement of the shares from the customer/client account to the error account is not reportable to CAT, as internal security movements and journal entries are not reportable to CAT.
7	Broker 1 executes the customer/client order from its error account @9.98	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TXYZ557 symbol: XYZ eventTimestamp: 20180501T153038.634456 manualFlag: false	

#	Step	Reported Event	Comments
		cancelFlag: false cancelTimestamp: quantity: 1,000 price: 9.98 capacity: P tapeTradeID: TRF127 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180416T000000 orderID: XYZ1234 side: B sellDetails: side: SL firmDesignatedID: ERR123 accountHolderType: X	

4.1.4. Industry Member Enters the Incorrect Side on a Customer/Client Order in Error

This scenario illustrates the CAT reporting requirements when an Industry Member receives a customer/client order and enters the incorrect side in error. In this scenario, the customer/client places an order to sell 100 shares of XYZ over the phone, and in error, the Industry Member enters an order to buy 100 shares of XYZ. The order is routed to an exchange for execution.

Once the Industry Member realizes the error, it moves the 100 shares of XYZ purchased in error from the customer's/client's account to its error account, and executes the customer/client order to sell 100 shares of XYZ out of its error account at the price the stock was trading when the customer/client originally placed the order.

The Industry Member then sells 200 shares of XYZ on an exchange for its error account to cover the shares acquired from the customer/client.
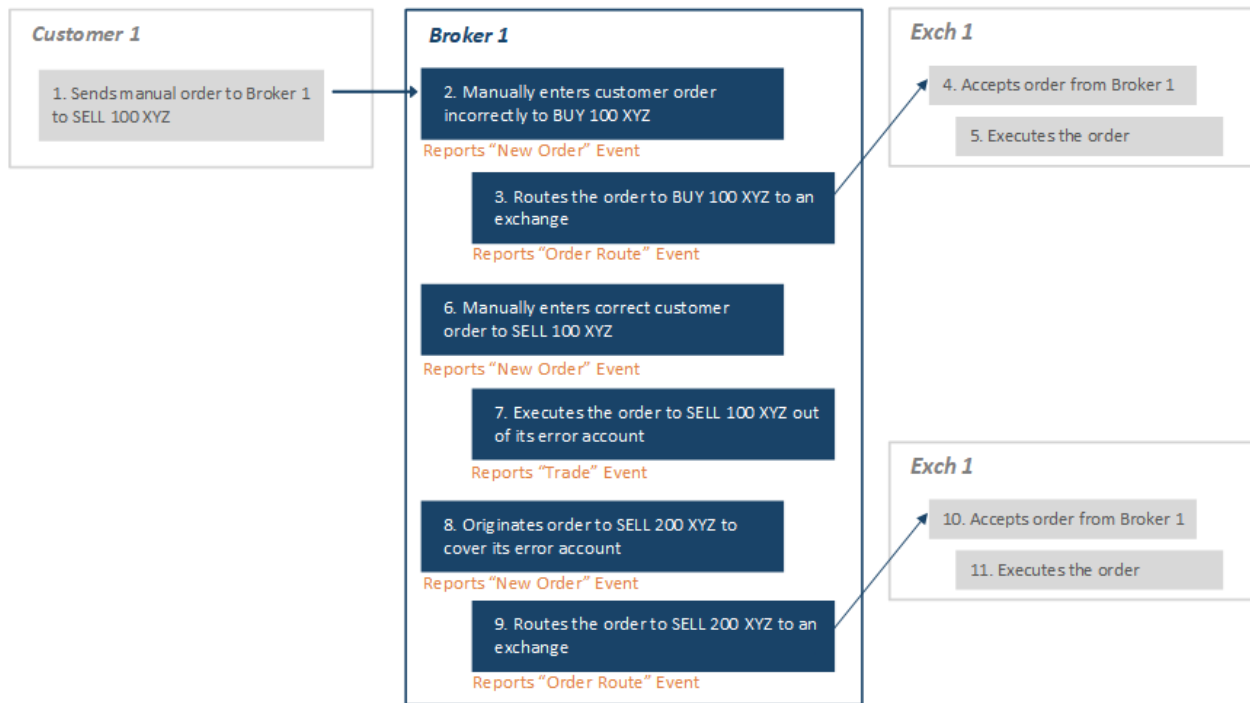
When the firm places an order in error to buy symbol XYZ, Industry Member Broker 1 is required to report:

- The entry of the customer/client order to buy the security in error (New Order event)
- The route of the buy order to an exchange (Order Route event)

When the firm realizes and corrects the error, Industry Member Broker 1 is required to report:

- The entry of the correct customer/client order to sell the security (New Order event)
- The fill of the customer/client order to sell XYZ from the firm's error account (Trade event)

- The origination of an order to sell the shares of XYZ acquired from the customer (New Order event)
- The route of the sell order to an exchange (Order Route event)

The movement of the shares from the customer/client account to the error account is not reportable to CAT, as internal security movements and journal entries are not reportable to CAT.

#	Step	Reported Event	Comments
1	Customer/client routes an order to Broker 1 to sell 100 shares of XYZ		

#	Step	Reported Event	Comments
2	Broker 1 enters an order to buy the security in error	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: XYZ1234 symbol: XYZ eventTimestamp: 20180501T153035.634456 manualFlag: true electronicTimestamp: 20180501T153035.634456 deptType: T side: B price: 9.99 quantity: 100 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST001 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the buy order to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: XYZ1234 symbol: XYZ eventTimestamp: 20180501T153036.634456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: B price: 9.99 quantity: 100 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA	

#	Step	Reported Event	Comments
4	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
5	Exch 1 executes the order	*Exch 1 reports a Participant **Trade event***	
6	Broker 1 realizes the error and moves the 100 shares of XYZ to its error account	*NA*	The movement of the shares from the customer/client account to the error account is not reportable to CAT, as internal security movements and journal entries are not reportable to CAT.
7	Broker 1 reports the receipt of the correct customer/client sell order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: XYZ1235 symbol: XYZ eventTimestamp: 20180501T153035.634456 manualFlag: true electronicTimestamp: 20180501T153038.634456 deptType: T side: SL price: 9.99 quantity: 100 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST001 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
8	Broker 1 satisfies the original customer/client sell order at the price that XYZ was trading when the customer/client originally placed the order	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180501T153038.634456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 100 price: 9.99 capacity: P	The *sellDetails* reflect the details of customer/client order XYZ1235. The *buyDetails* reflect the FDID of the firm's error account.

#	Step	Reported Event	Comments
		tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: side: B firmDesignatedID: ERR123 accountHolderType: X sellDetails: orderKeyDate: 20180501T000000 orderID: XYZ1235 side: SL	
9	Broker 1 originates an order to sell the shares acquired from the customer in its error account	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: XYZ5678 symbol: XYZ eventTimestamp: 20180501T153039.134456 manualFlag: false deptType: T side: SL price: 9.99 quantity: 200 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ERR123 accountHolderType: X affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
10	Broker 1 routes the sell order to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: XYZ5678 symbol: XYZ eventTimestamp: 20180501T153039.134456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E	

#	Step	Reported Event	Comments
		routedOrderID: AO124 session: s5 side: SL price: 9.99 quantity: 200 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA	
11	Exch 1 accepts the proprietary order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
12	Exch 1 executes the order	*Exch 1 reports a Participant **Trade event***	

4.1.5.   Industry Member Does Not Enter a Customer Order Until T+1

This scenario illustrates the CAT reporting requirements when an Industry Member receives a customer/client order and does not enter the customer order until T+1. In this scenario, the customer/client places an order to buy 100 shares of XYZ over the phone, and in error, the Industry Member enters the order on T+1. The order is routed to an exchange for execution.

Once the Industry Member realizes that the customer is due a price adjustment, it moves the 100 shares of XYZ from the customer's/client's account to its error account, and executes the customer/client order out of its error account at the price the stock was trading when the customer/client originally placed the order.

Industry Member Broker 1 is required to report:

- · The receipt of the customer/client order (New Order event)
- · The route of the order to the exchange (Order Route event)

· The execution of the order from the firm's error account at a price of 9.98 (Trade event)

The movement of the shares from the customer/client account to the error account is not reportable to CAT, as internal security movements and journal entries are not reportable to CAT.

#	Step	Reported Event	Comments
1	Customer/client manually routes an order to Broker 1		
2	Broker 1 accepts the customer order, but does not enter the order until T+1	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180502T000000 orderID: XYZ1234 symbol: XYZ eventTimestamp: 20180501T153035.634456 electronicTimestamp: 20180502T153035.634456 manualFlag: true deptType: T side: B price: 9.98 quantity: 100 orderType: LMT timeInForce: DAY=20180502 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST001 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to an exchange	*Broker 1 reports an* **Order Route event** type: MEOR orderKeyDate: 20180502T000000 orderID: XYZ1234 symbol: XYZ eventTimestamp: 20180502T153036.634456 manualFlag: false senderIMID: FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s1 side: B	

#	Step	Reported Event	Comments
		price: 10.00 quantity: 100 orderType: LMT timeInForce: DAY=20180502 tradingSession: REG affiliateFlag: false isoInd: NA	
4	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
5	Exch 1 executes the order	*Exch 1 reports a Participant **Trade event***	
6	Broker 1 realizes that a price adjustment is needed and moves the 100 shares of XYZ to its error account	*NA*	The movement of the shares from the customer/client account to the error account is not reportable to CAT, as internal security movements and journal entries are not reportable to CAT.
7	Broker 1 executes the customer/client order from its error account @9.98	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180502T000000 tradeID: TXYZ557 symbol: XYZ eventTimestamp: 20180502T153038.634456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 100 price: 9.98 capacity: P tapeTradeID: TRF127 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180502T000000 orderID: XYZ1234 side: B sellDetails: side: SL firmDesignatedID: ERR123 accountHolderType: X	The *buyDetails* reflect the details of customer/client order XYZ1234. The *sellDetails* reflect the FDID of the firm's error account.

4.1.6. Correction of a Trade Incorrectly Reported to a TRF/ADF/ORF

This scenario illustrates the CAT reporting requirements when an Industry Member makes a correction to a trade that was submitted to a TRF/ADF/ORF. In this scenario, Industry Member Broker 1 receives an order for 1,000 shares of XYZ at a price of 10.00 per share, and routes the order to Broker 2. Broker 2 executes the order at a price of 10.00 per share and reports the trade to the TRF, but incorrectly reports the trade as a sale of 10,000 shares at a price of 10.00. Broker 2 determines that the trade should have been reported with a quantity of 1,000 shares, and corrects the TRF report to reflect the correct shares quantity.
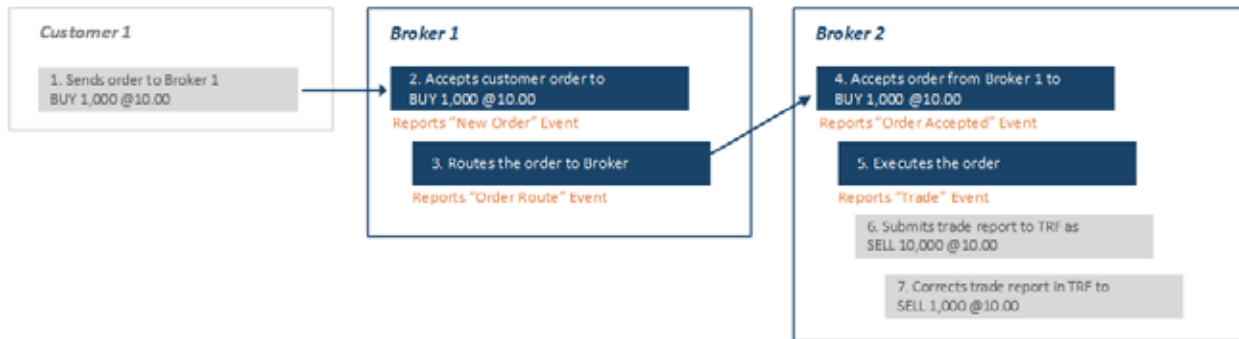
Industry Member Broker 1 is required to report:

- The receipt of an order for 1,000 shares (New Order event)
- The route of the order to Broker 2 (Order Route event)

Industry Member Broker 2 is required to report:

- The receipt of the order for 1,000 shares from Broker 1 (Order Accepted event)
- The execution of the order for 1,000 shares at a price of 10.00 (Trade event linking to the initially reported TRF report with a shares quantity of 10,000)

In its Trade event, Broker 2 should populate the *tapeTradeID* linking to the initially reported TRF report with an incorrect shares quantity of 10,000. In this scenario, Broker 2 is not required to submit any CAT reports reflecting the correction made in the TRF.

If the CAT Trade event was also submitted with an incorrect quantity of 10,000 shares, Broker 2 would be required to submit a correction to CAT correcting the quantity on the Trade event. Refer to Section 7.~~5~~6 of the CAT Reporting Technical Specifications for Industry Members for instructions on submitting corrections to previously accepted CAT Events.

#	Step	Reported Event	Comments
1	Customer/client routes an order to Broker 1 to		

#	Step	Reported Event	Comments
	Buy 1,000 shares of XYZ @10.00		
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: XYZ1234 symbol: XYZ eventTimestamp: 20180501T153035.634456 manualFlag: false deptType: T side: B price: 10.00 quantity: 1,000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST001 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: XYZ1234 symbol: XYZ eventTimestamp: 20180501T153036.634456 manualFlag: false senderIMID: FRMA destination: FRMB destinationType: F routedOrderID: AO123 session: side: B price: 10.00 quantity: 1,000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA	

#	Step	Reported Event	Comments
4	Broker 2 accepts the order from Broker 1	Broker 2 reports an ***Order Accepted event*** type: MEOA orderKeyDate: 20180501T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180501T153036.634456 manualFlag: false receiverIMID: FRMB senderIMID: FRMA senderType: F routedOrderID: AO123 affiliateFlag: false deptType: TA side: B price: 10.00 quantity: 1,000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Broker 2 executes the trade @10.00	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180501T153038.634456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1,000 price: 10.00 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180501T000000 20180416T000000 orderID: O34567 side: B sellDetails:	In its Trade event, Broker 2 should populate the *tapeTradeID* field linking to the initially submitted trade report with the incorrect quantity of 10.000

#	Step	Reported Event	Comments
		side: SL firmDesignatedID: PROP123 accountHolderType: P	
6	Broker 2 submits the trade to the TRF with an incorrect quantity of 10,000	*NA*	
7	Broker 2 corrects the TRF report to the correct quantity of 1,000	*NA*	

4.1.7. Trade is Cancelled after TRF Rejection due to 'Price out of Range'

This scenario illustrates the CAT reporting requirements when an Industry Member cancels a trade after receiving a TRF Rejection due to 'Price out of Range'. This is an edge case scenario and does not frequently occur.

In this scenario, an Industry Member receives an order to buy 1,000 shares of XYZ and executes the shares from a proprietary account at a price of 12.50. The Industry Member submits a media trade report to the TRF, but the trade report is rejected due to 'Price out of Range'. Instead of repairing the media trade report and resubmitting to the TRF, the Industry Member determines to cancel the trade.

For CAT reporting, the *cancelFlag* and *cancelTimestamp* fields are only required in a Trade event in instances where cancel information is not captured in the TRF. Since the media trade report was not repaired, the cancel information was therefore not captured in the TRF, and the Industry Member is required to populate the *cancelFlag* and *cancelTimestamp* fields in its CAT Trade event reflecting the time the Industry Member cancelled the trade.

This scenario illustrates the requirement that if the Industry Member is unable to populate the *cancelFlag* and *cancelTimestamp* fields in its initial Trade event submission to CAT, and must submit a 'COR' event to capture these fields.
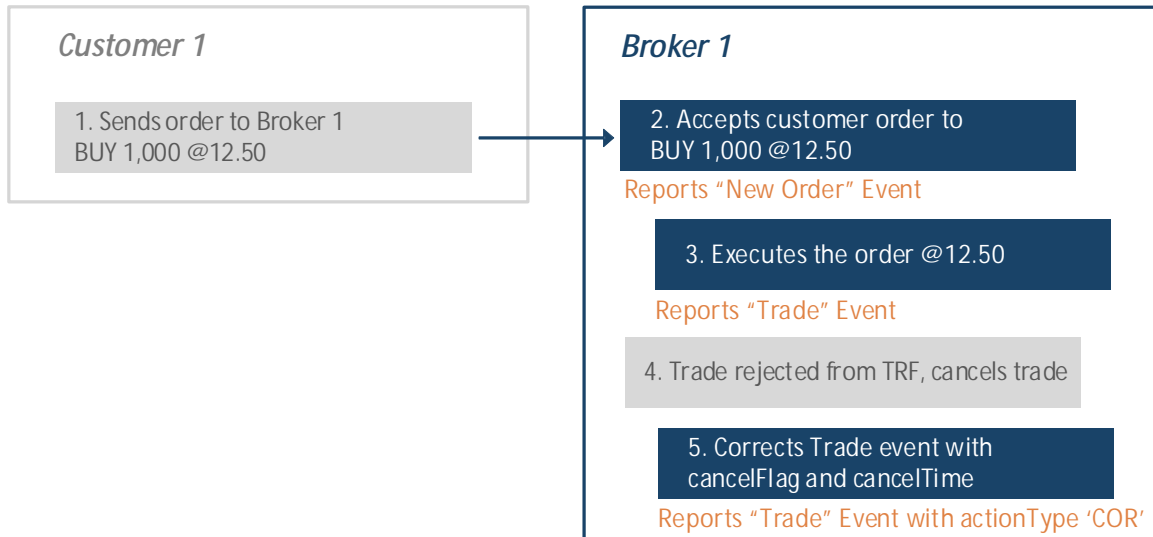
Industry Member Broker 1 is required to report:

- The receipt of the customer/client order (New Order event)
- The execution of the customer/client order (Order Trade event)
- The correction of the Trade event reflecting the addition of the *cancelFlag* and *cancelTimestamp* fields (Trade event with *actionType* 'COR')

Broker 1 may alternatively choose to combine the trade and cancel information into one MEOT event with the *cancelFlag* set to 'true' and the *cancelTimestamp* field populated if it is able to do so.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event** actionType: NEW firmROEID: 20180417_ M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false cancelFlag: false cancelTimestamp: deptType: TA side: B price: 12.50	

#	Step	Reported Event	Comments
		quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 executes the customer order	*Broker 1 reports a **Trade event*** actionType: NEW firmROEID: 20180417_ M12370 CATReporterIMID: BRK1 type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180417T153035.634456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 12.50 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: O11111 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	
4	Broker 1 cancels the trade because it was rejected in the TRF due to price out of range	*NA*	
5	Broker 1 corrects its Trade event to reflect the *cancelFlag* and	*Broker 1 reports a **Trade event*** actionType: COR	Broker 1 may alternatively choose to combine the trade and cancel information into one MEOT event

#	Step	Reported Event	Comments
	cancelTimestamp values	firmROEID: 20180417_ M12370 CATReporterIMID: BRK1 type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180417T153035.634456 manualFlag: false cancelFlag: true cancelTimestamp: 20180417T153050.634456 quantity: 1000 price: 12.50 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: O11111 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	with the *cancelFlag* set to 'true' and the *cancelTimestamp* field populated if it is able to do so.

5. FDID Scenarios

This section illustrates reporting requirements when populating the *firmDesignatedID* field ("FDID"). These scenarios are applicable to equivalent equities and options order flows. Refer to Section 2.43.2 of the CAT Reporting Technical Specifications for Industry Members, along with Published FDID guidance and Section M of the CAT FAQs regarding FDIDs for additional information.

5.1.1. An Order is Received from a New Customer/Client and an Account Number is not Finalized Until a Later Date

This scenario illustrates the CAT reporting requirements when an Industry Member receives an order from a new customer/client for which an account number is not yet established, and does not become finalized until a later date.

In this scenario, the Industry Member must report the receipt of the customer/client order on T, and the FDID must be populated with a value of "PENDING", indicating that an account number for this customer/client is not yet established. Once the account number is established on T+1, the Industry Member must report a New Order Supplement event with the FDID of the newly established account.
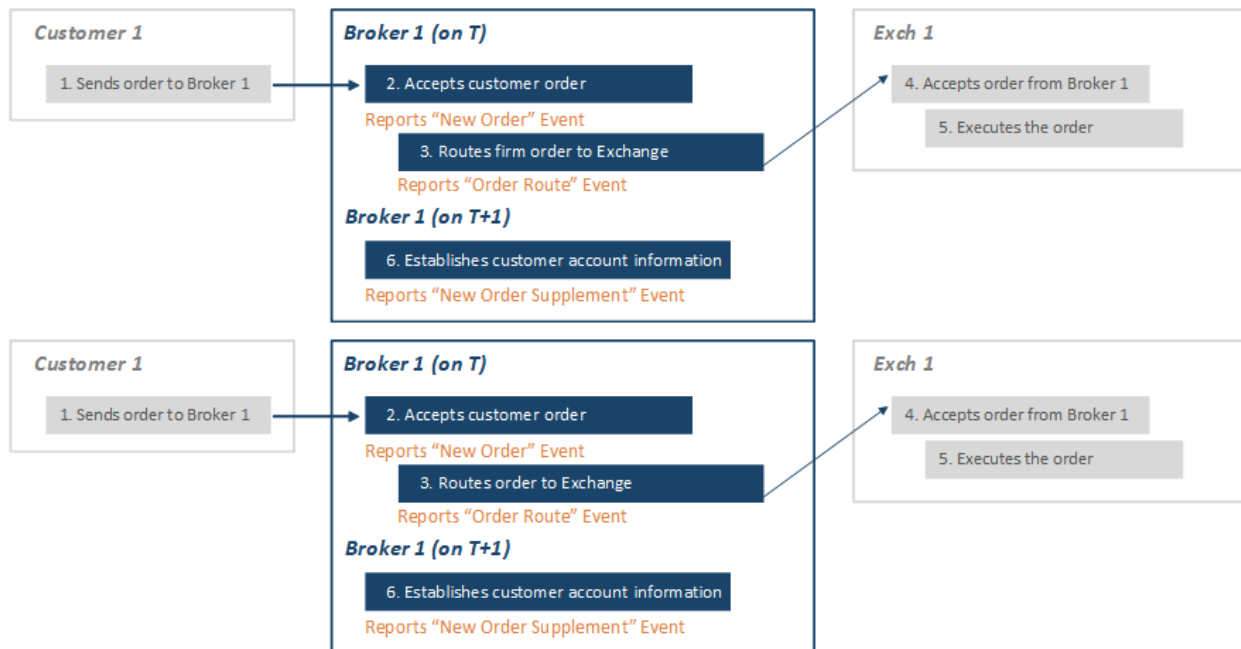
Industry Member Broker 1 is required to report:

- The receipt of the customer/client order, indicating that an account number is not yet established (New Order event)
- The route of the customer/client order to the exchange (Order Route event)
- The FDID of the customer/client account after the account number has been finalized (New Order Supplement event)

In this scenario, the customer is an individual retail customer, which is reflected with an *accountHolderType* value of "I". However, the reporting requirements in this scenario are not limited to retail customers.

If an Industry Member is unable to submit a New Order Supplement event once the FDID becomes available, the Industry Member may report this activity by submitting a "COR" event reflecting the update in FDID. However, CAT will be unable to distinguish that the COR record is an update of a "PENDING" FDID value, and will categorize the event as a firm initiated error correction.

#	Step	Reported Event	Comments
1	Customer/client sends a Buy order to Broker 1	*NA*	
2	On T, Broker 1 accepts the customer/client order, and indicates that an account number has not yet been established	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PENDING accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Broker 1 must populate a value of "PENDING" in the FDID field to indicate that an account number is not yet established, and that the FDID will be reported in a New Order Supplement event once the account number has been established.
3	Broker 1 routes the order to exchange EXCH1	Broker 1 (IMID = FRMA) reports an ***Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234556 manualFlag: false senderIMID: FRMA destination: EXCH1	

#	Step	Reported Event	Comments
		destinationType: E routedOrderID: XYZO555 session: s5 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
4	The Exchange accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	
5	The Exchange executes the order	*EXCH1 reports a Participant **Trade event***	
6	On T+1, Broker 1 finalizes the account number and reports the FDID to CAT	*Broker 1 reports a **New Order Supplement event*** type: MENOS orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 aggregatedOrders: firmDesignatedID: CUST1234	Once an account number is established on T+1, Broker 1 reports the FDID to CAT in a New Order Supplement event. When reporting a New Order Supplement event to establish an FDID for an account, the *aggregatedOrders* field must not be populated. The *orderKeyDate* is the date and time that the Order Key for the related New Order event was generated, which is T. The *eventTimestamp* in the New Order Supplement event must match the *eventTimestamp* value reported on the New Order event.

5.1.2. Order is Entered in the Wrong Account

This scenario illustrates the CAT reporting requirements when an Industry Member places an order for a customer in the wrong account. In this scenario, the Industry Member receives a customer order and manually places the order for the incorrect customer account. The firm routes the order to an exchange for execution. The Industry Member reports the order to CAT with the FDID of the incorrect account. After the order is reported to CAT, the Industry Member realizes the error, and moves the shares to the correct account.
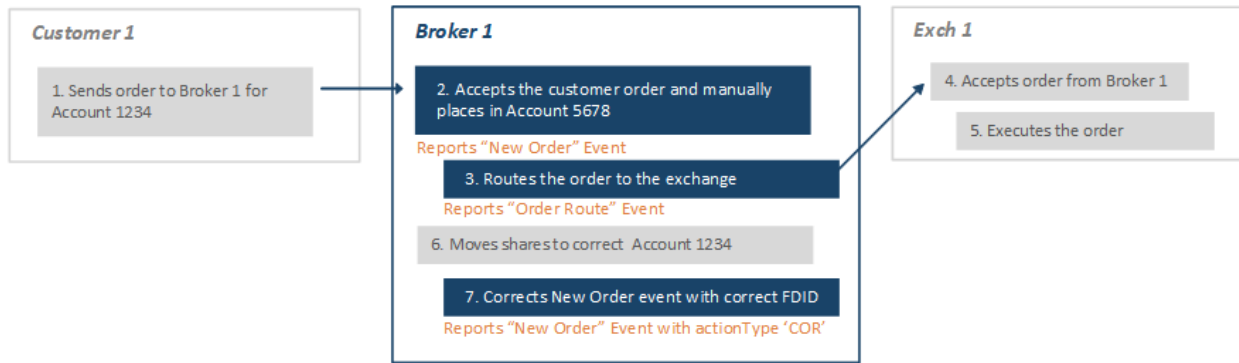
Industry Member Broker 1 is required to report:

· The receipt of the customer/client order with the FDID of the incorrect account (New Order event)

· The route of the customer/client order to the exchange (Order Route event)

· The correction of the FDID reported to CAT (New Order event with *actionType* 'COR')

Since the relevant events had already been reported to CAT, the Industry Member must correct the FDID by reporting a firm-initiated correction of the New Order event using an *actionType* of 'COR'. If the Industry Member had realized and corrected the error prior to submission, the Industry Member would be required to report the correct FDID in its New Order event.

#	Step	Reported Event	Comments
1	Customer/client sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts the customer/client order and places the order in the wrong account.	*Broker 1 reports a **New Order event*** actionType: NEW firmROEID: 20180417_ M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.00 manualFlag: true electronicTimestamp: 20180417T153035.234456 deptType: A side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG	

#	Step	Reported Event	Comments
		custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to exchange EXCH1	*Broker 1 reports an **Order Route event*** actionType: NEW firmROEID: 20180417_ M12370 type: MEOR CATReporterIMID: BRK1 orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.634556 manualFlag: false senderIMID: BRK1 destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: s5 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
4	Exch 1 accepts the order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
5	Exch 1 executes the full quantity of the order	*Exch 1 reports a Participant **Trade event***	
6	Broker 1 moves shares to the correct account	*NA*	The movement of the shares to the correct account is not reportable as a separate CAT event, as internal security movements and journal entries are not reportable to CAT.
7	Broker 1 submits a correction using the *actionType* of 'COR' correcting the FDID.	*Broker 1 reports a **New Order event*** actionType: COR	Note that, if the Broker had realized the error before reporting the original MENO, then it could have provided the correct FDID in its MENO, and

#	Step	Reported Event	Comments
		firmROEID: 20180417_ M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.00 manualFlag: true electronicTimestamp: 20180417T153035.234456 deptType: A side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST5678 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	would not have to subsequently submit the corrected MENO event in this step.

6. Error Correction Scenarios

This section illustrates reporting requirements when correcting an error in CAT. These scenarios are applicable to equivalent equities and options order flows. Refer to Section 7 of the CAT Reporting Technical Specifications for Industry Members and Section P of the CAT FAQs regarding Feedback and Error Corrections for additional information.

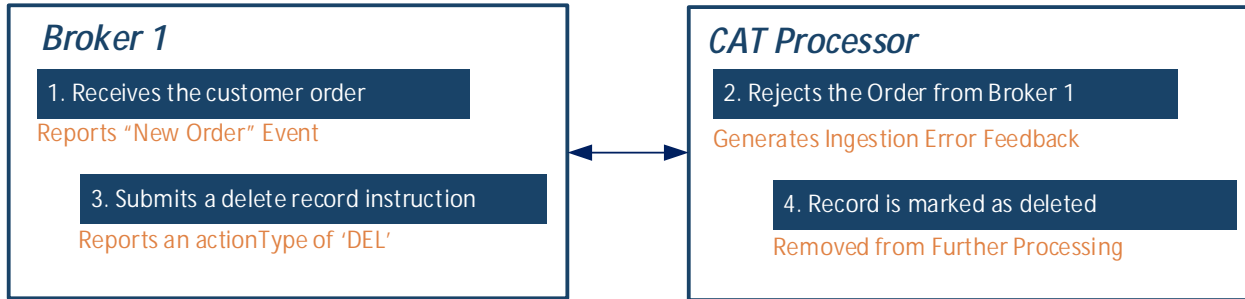### 6.1.1. Correcting an Error using Action Type of 'RPR'

This scenario illustrates the error feedback provided by the CAT Processor and the follow-up reporting requirements to CAT for an Industry Member that repairs an error using the Action Type of 'RPR'.

For this scenario, the following steps occur:

- Industry Member submits a New Order event that is subsequently rejected.
- The CAT Processor provides the error feedback to the Industry Member.
- The Industry Member corrects the error and resubmits to CAT.

Note that in the example below, only a subset of fields relevant to corrections have been included.

#	Step	Reported Event	Comments
1	Broker 1 submits an order.	*Broker 1 reports a* **New Order event** actionType: NEW firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: B	
2	Broker 1 receives feedback from the CAT Processor.	*Broker 1 receives feedback on the* **New Order event** errorCode: 2001 actionType: RPR errorROEID: 123456789	Rejected with Error Code 2001 - Missing or Invalid *accountHolderType*

#	Step	Reported Event	Comments
		firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: B	
3	The Industry Member repairs the record using the Action Type of 'RPR' and resubmits.	*Broker 1 resubmits the **New Order event*** actionType: RPR errorROEID: 123456789 firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: P	
4	CAT Processor accepts the repair.		The original error will be considered as repaired. The repaired event will be processed by CAT.

6.1.2. Correcting an Error using the Action Type of 'COR'

This scenario illustrates the error feedback provided by the CAT Processor and the follow-up reporting requirements to CAT for an Industry Member that repairs an error using the Action Type of 'COR'.

For this scenario, the following steps occur:

· Industry Member submits a New Order event that is subsequently rejected.
· The CAT Processor provides the error feedback to the Industry Member.
· The Industry Member corrects the error and resubmits to CAT.

Note that in the example below, only a subset of fields relevant to corrections have been included.

#	Step	Reported Event	Comments
1	Broker 1 submits an order	*Broker 1 reports a **New Order event*** actionType: NEW firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: B	
2	Broker 1 receives feedback from the CAT Processor	*Broker 1 receives feedback on the **New Order event*** errorCode: 2001 actionType: RPR errorROEID: 123456789 firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: B	Rejected with Error Code 2001 - Missing or Invalid *accountHolderType* Feedback includes *actionType* of RPR
3	The Industry Member repairs the record using the Action Type of 'COR' and resubmits.	*Broker 1 resubmits the **New Order event*** actionType: COR errorROEID: firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456	

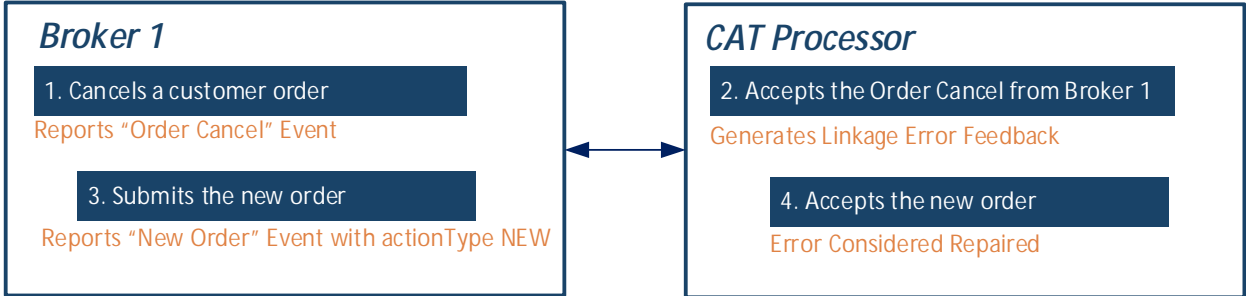| #	Step	Reported Event	Comments
		orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: P	
4	CAT Processor accepts the repair.		The original error will be considered as repaired. The repaired event will be processed by CAT.

6.1.3.   Firm Initiated Correction using Action Type of 'COR'

This scenario illustrates the firm initiated correction reporting requirements to CAT for an Industry Member that corrects an error using the Action Type of 'COR'.

For this scenario, the following steps occur:

· Industry Member submits a New Order event that is accepted.
· The Industry Member subsequently submits a correction to the *accountHolderType* field reported to CAT.

Broker 1
1. Receives the customer order
Reports "New Order" Event
3. Resubmits the order
Reports "New Order" Event with actionType COR

CAT Processor
2. Accepts the Order from Broker 1
No Ingestion Error Feedback Generated
4. Accepts the correction
Re-submitted "New Order" Event Accepted

Note that in the example below, only a subset of fields relevant for corrections have been included.

#	Step	Reported Event	Comments
1	Broker 1 submits an order.	*Broker 1 reports a **New Order event*** actionType: NEW firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456	

#	Step	Reported Event	Comments
		accountHolderType: P	
2	Broker 1 order is accepted.		
3	The Industry Member submits a correction using the Action Type of 'COR'.	*Broker 1 resubmits the **New Order event*** actionType: COR errorROEID: firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: A	
4	CAT Processor accepts the correction.		The corrected event will be processed by CAT.

6.1.4. File Deletion

This scenario illustrates the reporting requirements to CAT for an Industry Member that submits a delete file instruction. After the firm has received the File Acknowledgement feedback, the file deletion instruction may only be used for files with data representing an event date that is prior to 8 am on T+4. All events contained within the original file for which the file deletion instruction was received must have an Action Type of NEW.

For this scenario, the following steps occur:

- ·   Industry Member submits a New Order event that is subsequently rejected.
- ·   The CAT Processor provides the error feedback to the Industry Member.
- ·   The Industry Member submits a delete file instruction to CAT.

Broker 1

1. Receives the customer order

Reports "New Order" Event

3. Submits a delete instruction

Reports an empty file with .DEL appended

CAT Processor

2. Rejects the Order from Broker 1

Generates Ingestion Error Feedback

4. All records in the file marked as delete

Removed from Further Processing

Note that in the example below, only a subset of fields relevant for corrections have been included.

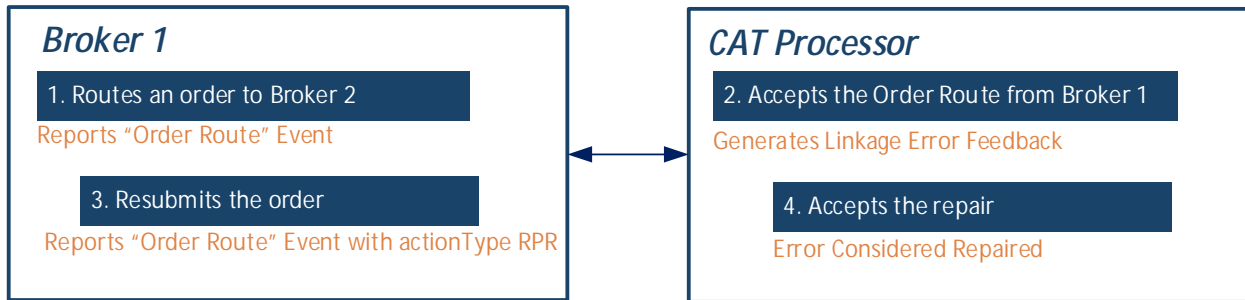| #	Step	Reported Event	Comments
1	Broker 1 submits an order	*Broker 1 reports a **New Order event*** actionType: NEW firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: B fileName: SUBID_BRK1_20180501_OrderEvents_000123.json.bz2	
2	Broker 1 receives feedback from the CAT Processor	*Broker 1 receives feedback on the **New Order event*** errorCode: 2001 actionType: RPR errorROEID: 123456789 firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: B	Rejected with Error Code 2001 - Missing or Invalid *accountHolderType*
3	The Industry Member submits a delete file instruction	*Broker 1 submits an empty file with delete instruction on 20180503.* SUBID_BRK1_20180503_OrderEvents_000123.DEL.json.bz2	
4	CAT Processor marks all records in the file as deleted		All events included in the original file submission will be considered deleted. All associated errors will be considered as repaired.

6.1.5. Deleting an Erroneous Record using Action Type of 'DEL'

This scenario illustrates the error feedback provided by the CAT Processor and the follow-up reporting requirements to CAT for an Industry Member that submits a record delete instruction.

For this scenario, the following steps occur:

· Industry Member submits a New Order event that is submitted and accepted.

- The CAT Processor provides the error feedback to the Industry Member.
- The Industry Member submits a delete record instruction to CAT.

Note that in the example below, only a subset of fields relevant for corrections have been included.

#	Step	Reported Event	Comments
1	Broker 1 submits an order	*Broker 1 reports a **New Order event*** actionType: NEW firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: B	
2	Broker 1 receives feedback from the CAT Processor	*Broker 1 receives feedback on the **New Order event*** errorCode: 2001 actionType: RPR errorROEID: 123456789 firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: B	Rejected with Error Code 2001 - Missing or Invalid *accountHolderType*
3	The Industry Member submits a delete record instruction	*Broker 1 submits a delete record instruction.* actionType: DEL errorROEID: 123456789 firmROEID:	

#	Step	Reported Event	Comments
4	CAT Processor marks the record as deleted		The original record will be considered as deleted. All associated errors will be considered as repaired.

6.1.6. Deleting a record with no Error Feedback using Action Type of 'DEL'

This scenario illustrates the follow-up reporting requirements to CAT for an Industry Member that submits a record delete instruction without receiving Error Feedback.

For this scenario, the following steps occur:

- · Industry Member submits a New Order event that is accepted.
- · The Industry Member submits a delete record instruction to CAT.

Note that in the example below, only a subset of fields relevant for corrections have been included.

#	Step	Reported Event	Comments
1	Broker 1 submits an order	*Broker 1 reports a **New Order event*** actionType: NEW firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: P	
2	Broker 1 order is accepted.		
3	The Industry Member submits a delete record instruction.	*Broker 1 submits a delete record instruction.* actionType: DEL errorROEID:	

#	Step	Reported Event	Comments
		firmROEID: 20180501_M12360	
4	CAT Processor marks the record as deleted.		The original record will be considered as deleted. All associated errors will be considered as repaired.

6.1.7. Correcting an Unreadable Event using Action Type of 'RPR'

This scenario illustrates the error feedback provided by the CAT Processor and the follow-up reporting requirements to CAT for an Industry Member that repairs an error using the Action Type of 'RPR' when the submitted record is unreadable by CAT.

For this scenario, the following steps occur:

· Industry Member submits a New Order that is subsequently rejected because it was malformed and could not be parsed.

· The CAT Processor provides the error feedback to the Industry Member including the Error Code.

· The Industry Member corrects the error and resubmits to CAT.

Broker 1

1. Receives the customer order
Reports "New Order" Event

3. Resubmits the order
Reports "New Order" Event with actionType RPR

CAT Processor

2. Rejects the Order from Broker 1
Generates Ingestion Error Feedback

4. Accepts the repair
Error Considered Repaired

Note that in the example below, only a subset of fields relevant for corrections have been included.

#	Step	Reported Event	Comments
1	Broker 1 submits an order	*Broker 1 reports an unreadable record.*	
2	Broker 1 receives feedback from the CAT Processor	*Broker 1 receives feedback*	Rejected with Error Code 2134 - Invalid JSON or CSV format The record cannot be parsed, hence the only fields that will be returned will be *errorCode*, *actionType* and *errorROEID.*
3	The Industry Member repairs the record using the Action Type of 'RPR' and resubmits.	*Broker 1 resubmits the* **event** actionType: RPR errorROEID: 123456789 firmROEID: 20180501_M12360	

#	Step	Reported Event	Comments
		type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: P	
4	CAT Processor accepts the repair.		The original error will be considered as repaired. The repaired event will be processed by CAT.

6.1.8. Correcting an Intrafirm Linkage Error using Action Type of 'NEW'

This scenario illustrates the error feedback provided by the CAT Processor and the follow-up reporting requirements to CAT for an Industry Member that repairs an intra-firm linkage error using the action type of 'NEW'. This scenario applies to error code 3501 when the originating event does not exist in CAT.

In such instances, the reporting of a 'RPR' or 'COR' is not applicable since the unlinked event must remain. The error is resolved by reporting the missing event.

For this scenario, Industry Member Broker 1 reported an Order Cancel event, without an associated origination event:

- Order Cancel event submitted by Broker 1 is unlinked due to Order Key not found.
- The CAT Processor provides the intra-firm linkage error feedback to the Industry Member.
- The Industry Member submits the missing event to the CAT Processor, which corrects the linkage error.

Note that in the example below, only a subset of fields relevant for corrections have been included.

#	Step	Reported Event	Comments
1	Broker 1 reports an order cancel event	*Broker 1 reports an **Order Cancel event*** actionType: NEW firmROEID: 20180417_Q12360 type: MEOC CATReporterIMID:BRK1 orderKeyDate: 20180417T000000 eventTimestamp: 20180417T143035.323556 symbol: XYZ orderID: Z23456 cancelQty: 1000	
2	Broker 1 receives feedback from the CAT Processor.	*Broker 1 receives feedback on the **Order Cancel event*** errorCode: 3501 actionType: RPR errorROEID: 923451234 firmROEID: 20180417_Q12360 type: MEOC CATReporterIMID:BRK1 orderKeyDate: 20180417T000000 orderID: Z23456 symbol: XYZ cancelQty: 1000	Linkage Error Code 3501 - Secondary Event – Order Key, Trade Key, Quote Key or Fulfillment Key not found
3	The Industry Member repairs the unlink record using the Action Type of 'NEW'.	*Broker 1 submits the **New Order event*** actionType: NEW firmROEID: 20180417_Q12378 type: MENO CATReporterIMID:BRK1 orderKeyDate: 20180417T000000 orderID: Z23456 symbol: XYZ quantity: 1000	The late reported MENO event is NOT required to include the errorROEID or firmROEID of the associated linkage error.
5	CAT Processor accepts the unlink repair.		During processing, CAT will make the linkage and the original linkage error will be considered repaired.

6.1.9. Correcting an Interfirm Linkage Error using Action Type of 'RPR'

This scenario illustrates the error feedback provided by the CAT Processor and the follow-up reporting requirements to CAT for an Industry Member that repairs an interfirm linkage error using the Action Type of 'RPR'.

For this scenario, ~~Industry Member Broker 1 is required to report the following events:~~the following events occur:

- · Order Route event submitted by Broker 1 is unlinked because a matching *routedOrderID* cannot be found
- · The CAT Processor provides the unlinked error feedback to the Industry Member.
- · The Industry Member corrects the error and resubmits to CAT.

Note that in the example below, only a subset of fields relevant for corrections have been included.

#	Step	Reported Event	Comments
1	Broker 1 routes order to Broker 2.	*Broker 1 reports an* **Order Route event** actionType: NEW firmROEID: 20180417_Z12360 type: MEOR orderKeyDate: 20180417T000000 eventTimestamp: 20180417T153035.234556 symbol: XYZ senderIMID: FRMA destination: FRMB orderID: O23456 routedOrderID: AO222	
2	Broker 1 receives feedback from the CAT Processor.	*Broker 1 receives feedback on the* **Order Route event** errorCode: 8003 actionType: RPR errorROEID: 123451234 firmROEID: 20180417_Z12360 type: MEOR orderKeyDate: 20180417T000000 eventTimestamp: 20180417T153035.234556 symbol: XYZ senderIMID: FRMA destination: FRMB orderID: O23456	Linkage Error Code 8003 - Matching *routedOrderID* cannot be found.

#	Step	Reported Event	Comments
		routedOrderID: AO222	
3	Broker 1 receives feedback from the CAT Processor.	*Broker 1 receives feedback as Named on the **Order Accept event*** errorCode: 9004 actionType: RPR firmROEID:20180417_Z12322 eventTimestamp: 20180417T153035.234556 symbol: XYZ receiverIMID: FRMB senderIMID: FRMA routedOrderID: AO223 quantity:100	Linkage Error Code 9004: Named - Matching *routedOrderID* cannot be found.
4	The Industry Member repairs the unlink record using the Action Type of 'RPR' and resubmits.	*Broker 1 resubmits the **Order Route event*** actionType: RPR errorROEID: 123451234 firmROEID: 20180417_Z12360 type: MEOR orderKeyDate: 20180417T000000 eventTimestamp: 20180417T153035.234556 symbol: XYZ senderIMID: FRMA destination: FRMB orderID: O23456 routedOrderID: AO223	The firm may also use actionType of 'COR' when re-submitting the Order Route event.
5	CAT Processor accepts the unlink repair.		During processing, CAT will make the linkage and BOTH of the original linkage errors will be considered repaired.

7. Floor Broker Scenarios

7.1. NYSE Floor Broker Scenarios

This section illustrates the CAT reporting requirements for NYSE Floor Brokers.

7.1.1. Order Routed to a Floor Broker Within the Same Broker-Dealer

This scenario illustrates the CAT reporting requirements when an Industry Member receives a customer order, and further routes the customer order to a floor broker within the same broker-dealer that uses a separate IMID. While both parties belong to the same Industry Member, Broker 1 maintains a separate IMID for its upstairs desk and its floor broker. Upon receipt of the order, the floor broker further routes the order to the exchange for execution.

Industry Member Broker 1's upstairs desk (FRMA) is required to report:

· The receipt of the order from the customer (New Order event)
· The route of the order to its floor broker (Order Route event)

Industry Member Broker 1's floor broker (FBKA) is required to report:

· The receipt of the order from Broker 1's upstairs desk (Order Accepted event)
· The route of the order to the exchange (Order Route event)

Since Broker 1 maintains separate IMIDs for its floor broker and its upstairs desk, Broker 1 is required to report an MEOR reflecting a route to the floor broker, not an MEIR. Refer to CAT FAQ L1 for additional information on equity floor broker reporting.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the customer order at IMID FRMA	*Broker 1's upstairs desk (IMID=FRMA) reports a* **New Order event**	

#	Step	Reported Event	Comments
		type: MENO orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	FRMA routes the order to the floor broker FBKA	*FRMA reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234556 manualFlag: false senderIMID: FRMA destination: F1 destinationType: F routedOrderID: XYZO555 session: side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: true isoInd: NA handlingInstructions:	In this scenario, the *destination* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When routing an order to another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.
4	Floor broker accepts the	*Broker 1's Floor Broker*	In this scenario, the *receiverIMID*

#	Step	Reported Event	Comments
	order from FRMA	*(IMID=FBKA) reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.534556 manualFlag: false receiverIMID: F1 senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: true deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When receiving an order from another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.
5	Floor broker routes the order to the exchange	*FBKA reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153036.534556 manualFlag: false senderIMID: BDG1234 destination: EXCH1 destinationType: E routedOrderID: XYZO560 session: Es6:AA side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order.

#	Step	Reported Event	Comments
		handlingInstructions:	
6	The Exchange accepts the order from the floor broker	*EXCH1 reports a Participant **Order Accepted event***	
7	The Exchange executes the order	*EXCH1 reports a Participant **Trade event***	

7.1.2.   Order Routed to a Floor Broker at Another Broker-Dealer

This scenario illustrates the CAT reporting requirements when an Industry Member receives a customer order, and further routes the customer order to a floor broker at another broker-dealer. Upon receipt of the order, the floor broker further routes the order to the exchange for execution.

Industry Member Broker 1's upstairs desk (FRMA) is required to report:

·   The receipt of the order from the customer (New Order event)

·   The route of the order to Broker 2's floor broker (Order Route event)

Industry Member Broker 2's floor broker (FBKB) is required to report:

·   The receipt of the order from Broker 1's upstairs desk (Order Accepted event)

·   The route of the order to the exchange (Order Route event)

Refer to CAT FAQ L1 for additional information on equity floor broker reporting.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the customer order at IMID FRMA	*Broker 1's upstairs desk (IMID=FRMA) reports a **New Order event***	

#	Step	Reported Event	Comments
		type: MENO orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	FRMA routes the order to Broker 2's floor broker FBKB	*FRMA reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234556 manualFlag: false senderIMID: FRMA destination: F2 destinationType: F routedOrderID: XYZO555 session: side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	In this scenario, the *destination* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When routing an order to another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.
4	Broker 2's floor broker	*Broker 2's Floor Broker*	In this scenario, the *receiverIMID*

#	Step	Reported Event	Comments
	accepts the order from FRMA	*(IMID=FBKB) reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.534556 manualFlag: false receiverIMID: F2 senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: true deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When receiving an order from another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.
5	Broker 2's floor broker routes the order to the exchange	*FBKB reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153036.534556 manualFlag: false senderIMID: BDG3456 destination: EXCH1 destinationType: E routedOrderID: XYZO560 session: Es6:AA side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order.

#	Step	Reported Event	Comments
		handlingInstructions:	
6	The Exchange accepts the order from the floor broker	*EXCH1 reports a Participant **Order Accepted event***	
7	The Exchange executes the order	*EXCH1 reports a Participant **Trade event***	

7.1.3.   Floor Broker Routes an Order to a Floor Broker at Another Broker-Dealer

This scenario illustrates the CAT reporting requirements when a floor broker routes an order to a floor broker at another Broker-Dealer. In this scenario, Industry Member Broker 1 receives a customer order, and further routes the customer order to a floor broker within the same broker-dealer that uses a separate IMID. Upon receipt of the order, the floor broker routes the order to Industry Member Broker 2's floor broker. Industry Member Broker 2's floor broker routes the order to the exchange for execution.

Industry Member Broker 1's upstairs desk (FRMA) is required to report:

· The receipt of the order from the customer (New Order event)
· The route of the order to its floor broker (Order Route event)

Industry Member Broker 1's floor broker (FBKA) is required to report:

· The receipt of the order from Broker 1's upstairs desk (Order Accepted event)
· The route of the order to Broker 2's floor broker (Order Route event)

Industry Member Broker 2's floor broker (FBKB) is required to report:

· The receipt of the order from Broker 1 (Order Accepted event)

· The route of the order to the exchange (Order Route event)

Refer to CAT FAQ L1 for additional information on equity floor broker reporting.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	NA	
2	Broker 1 accepts the customer order at IMID FRMA	Broker 1's upstairs desk (IMID=FRMA) reports a **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	FRMA routes the order to its floor broker FBKA	FRMA reports an **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234556 manualFlag: false senderIMID: FRMA destination: F1 destinationType: F routedOrderID: XYZO555	In this scenario, the *destination* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When routing an order to another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.

#	Step	Reported Event	Comments
		session: side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: true isoInd: NA handlingInstructions:	
4	Broker 1's floor broker accepts the order from FRMA	*Broker 1's Floor Broker (IMID=FBKA) reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.534556 manualFlag: false receiverIMID: F1 senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: true deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: custDspIntrFlag: false	In this scenario, the *receiverIMID* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When receiving an order from another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.
5	Broker 1's floor broker routes the order to Broker 2's floor broker	*FBKA reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.734556 manualFlag: false	In this scenario, the *senderIMID* represents the entering firm mnemonic of the floor broker routing the order. The *destination* represents the badge number of the floor broker routing the order.

#	Step	Reported Event	Comments
		senderIMID: F1 destination: BDG3456 destinationType: F routedOrderID: XYZO560 session: side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
6	Broker 2's floor broker accepts the order from Broker 1's floor broker	*Broker 2's Floor Broker (IMID=FBKB) reports an* **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000 orderID: O9999 symbol: XYZ eventTimestamp: 20180417T153035.934556 manualFlag: false receiverIMID: BDG3456 senderIMID: F1 senderType: F routedOrderID: XYZO560 affiliateFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: custDspIntrFlag: false	In this scenario, the *destination* represents the entering firm mnemonic of the floor broker routing the order. The *receiverIMID* represents the badge number of the floor broker routing the order.
7	Broker 2's floor broker routes the order to the exchange	*FBKB reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O9999	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order.

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180417T153036.434556 manualFlag: false senderIMID: BDG3456 destination: EXCH1 destinationType: E routedOrderID: XYZO575 session: Es6:AA side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
8	The Exchange accepts the order from the floor broker	*EXCH1 reports a Participant **Order Accepted event***	
9	The Exchange executes the order	*EXCH1 reports a Participant **Trade event***	

7.1.4.   Floor Broker Routes an Order to an Exchange Operated Algorithm

This scenario illustrates the CAT reporting requirements when a floor broker receives an order and routes the order to an exchange operated algorithm. In this scenario, Industry Member Broker 1 receives a customer order, and further routes the customer order to a floor broker within the same broker-dealer that uses a separate IMID.

Upon receipt of the order, the floor broker further routes the order to an exchange operated algorithm. The algorithm routes the order to the exchange for execution. The exchange operated algorithm is considered to be a separate department or desk of Broker 1's floor broker for the purposes of reporting to CAT.

Industry Member Broker 1's upstairs desk (FRMA) is required to report:

· The receipt of the order from the customer (New Order event)
· The route of the order to its floor broker (Order Route event)

Industry Member Broker 1's floor broker (FBKA) is required to report:

· The receipt of the order from Broker 1's upstairs desk (Order Accepted event)
· The internal route of the order to the exchange operated algorithm (Order Internal Route Accepted event)
· The route of the order to the exchange (Order Route event)

The floor broker's route to the exchange operated algorithm is required to be reported as an MEIR event with a *handlingInstructions* value of "FBA". Refer to CAT FAQ L1 for additional information on equity floor broker reporting.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the customer order at IMID FRMA	*Broker 1's upstairs desk (IMID=FRMA) reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A	

#	Step	Reported Event	Comments
		side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	FRMA routes the order to its floor broker FBKA	*FRMA reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234556 manualFlag: false senderIMID: FRMA destination: F1 destinationType: F routedOrderID: XYZO555 session: side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: true isoInd: NA handlingInstructions:	In this scenario, the *destination* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When routing an order to another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.
4	Floor broker receives the order from FRMA	*Broker 1's Floor Broker (IMID=FBKA) reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.534556	In this scenario, the *receiverIMID* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number. When receiving an order from another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.

#	Step	Reported Event	Comments
		manualFlag: false receiverIMID: F1 senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: true deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: custDspIntrFlag: false	
5	Floor broker routes the order to an exchange operated algorithm	*FBKA reports an **Order Internal Route Accepted event*** type: MEIR orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ parentOrderKeyDate: parentOrderID: eventTimestamp: 20180417T153035.534556 manualFlag: false deptType: A receivingDeskType: FB infoBarrierID: BDG1234 side: B price: 10.00 quantity: 5000 orderType: LMT handlingInstructions: FBA timeInForce: DAY=20180417 tradingSession: REG	When the order is internally routed, a new Order Key is not assigned, and the Parent Order Key fields must remain blank. In this scenario, the *infoBarrierID* is populated with the Badge Number of the floor broker routing the order. A *handlingInstructions* value of FBA is required on the MEIR event.
6	FBKA routes the order to the exchange using the exchange operated algo	*FBKA reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp:	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order. In phase 2c, a *handlingInstructions* value of FBA will be required on the MEOR event.

#	Step	Reported Event	Comments
		20180417T153036.534556 manualFlag: false senderIMID: BDG1234 destination: EXCH1 destinationType: E routedOrderID: XYZO560 session: Es6:AA side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
7	The Exchange accepts the order from the floor broker	*EXCH1 reports a Participant **Order Accepted event***	
8	The Exchange executes the order	*EXCH1 reports a Participant **Trade event***	

7.1.5. Floor Broker Routes an Order to an Algorithm Operated by Another Broker-Dealer

This scenario illustrates the CAT reporting requirements when a floor broker receives an order and routes the order to a third party algorithm operated by another broker-dealer. In this scenario, Industry Member Broker 1 receives a customer order, and further routes the customer order to a floor broker within the same broker-dealer that uses a separate IMID.

Upon receipt of the order, the floor broker routes the order to a third party algorithm operated by another broker-dealer. The third party algorithm, which is operated by a registered broker-dealer, routes part of the order to the NYSE for execution and the rest of the order to an away exchange.

Industry Member Broker 1's upstairs desk (FRMA) is required to report:

· The receipt of the order from the customer (New Order event)

· The route of the order to its floor broker (Order Route event)

Industry Member Broker 1's floor broker (FBKA) is required to report:

· The receipt of the order from Broker 1's upstairs desk (Order Accepted event)

· The route of the order to the third party algorithm (Order Route event)

The broker-dealer operating the algorithm is required to report:

· The receipt of the order (Order Accepted event)

· The partial route of the order to NYSE (Order Route event)

· The partial route of the order to an away market (Order Route event)

In this scenario, the reporting requirements for the third party algorithm are the same if algorithm is acting as a broker-dealer or acting solely as a technology provider. Refer to CAT FAQ L1 for additional information on equity floor broker reporting.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	NA	
2	Broker 1 accepts the customer order at IMID FRMA	Broker 1's upstairs desk (IMID=FRMA) reports a **New Order event** type: MENO	

#	Step	Reported Event	Comments
		orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	FRMA routes the order to its floor broker FBKA	*FRMA reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234556 manualFlag: false senderIMID: FRMA destination: F1 destinationType: F routedOrderID: XYZO555 session: side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: true isoInd: NA handlingInstructions:	In this scenario, the *destination* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth number When routing an order to another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.
4	Floor broker receives the order from FRMA	*Broker 1's Floor Broker (IMID=FBKA) reports an **Order Accepted event***	In this scenario, the *receiverIMID* represents the entering firm mnemonic of the floor broker receiving the order, which is a booth

#	Step	Reported Event	Comments
		type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.534556 manualFlag: false receiverIMID: F1 senderIMID: FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: true deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: custDspIntrFlag: false	number. When routing an order to another IMID within the same broker-dealer, the *affiliateFlag* must be populated as 'true'.
5	Floor broker routes the order to a third party algorithm operated by a broker-dealer	*FBKA reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.734556 manualFlag: false senderIMID: BDG1234 destination: BDAP destinationType: F routedOrderID: XYZO560 session: side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order. In phase 2c, a *handlingInstructions* value of FBA will be required on the MEOR event.

#	Step	Reported Event	Comments
6	The Industry Member operating the algo accepts the order from FBKA	*Broker-Dealer Algo Provider (IMID=BDAP) reports an* **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000 orderID: O56789 symbol: XYZ eventTimestamp: 20180417T153035.934556 manualFlag: false receiverIMID: BDAP senderIMID: BDG1234 senderType: F routedOrderID: XYZO560 affiliateFlag: false deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: FBA custDspIntrFlag: false	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order. A *handlingInstructions* value of FBA is required.
7	BDAP partially routes the order to NYSE	*BDAP reports an* **Order Route event** type: MEOR orderKeyDate: 20180417T000000 orderID: O56789 symbol: XYZ eventTimestamp: 20180417T153036.434556 manualFlag: false senderIMID: BDAP destination: NYSE destinationType: E routedOrderID: XYZO570 session: Es6:AA side: B price: 10.00 quantity: 3000 orderType: LMT timeInForce: DAY=20180417	In phase 2c, a *handlingInstructions* value of FBA will be required on the MEOR event.

#	Step	Reported Event	Comments
		tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
8	NYSE accepts the order from the floor broker	*NYSE reports a Participant **Order Accepted event***	
9	NYSE executes the order	*NYSE reports a Participant **Trade event***	
10	BDAP partially routes the order to an away market	*BDAP reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O56789 symbol: XYZ eventTimestamp: 20180417T153036.434556 manualFlag: false senderIMID: BDAP destination: EXCH1 destinationType: E routedOrderID: XYZO575 session: Es6:AA side: B price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	In phase 2c, a *handlingInstructions* value of FBA will be required on the MEOR event.
11	The exchange accepts the order from the floor broker	*EXCH1 reports a Participant **Order Accepted event***	
12	The exchange executes the order	*EXCH1 reports a Participant **Trade event***	

7.2. Cboe Floor Broker Scenarios

6.1.10. This section illustrates the CAT reporting requirements for Cboe Floor Brokers.

7.2.1. Cboe Options Floor Broker Receives and Routes Order to Cboe Options Matching Engine for Further Handling and Execution

This scenario illustrates the CAT Phase 2b reporting requirements when Industry Member Broker 1 receives a simple electronic options order from a customer, and routes the order through the Cboe Options exchange systems to an Industry Member Floor Broker.

The Floor Broker then determines to route the order through the Cboe Options exchange systems to the exchange matching engine so that the order can electronically trade or book. Once there, the order is fully executed via the exchange matching engine. Note that in this scenario "Broker 1" could be an Industry Member located off or on the Cboe Options exchange trading floor, including a floor broker.

Industry Member Broker 1 is required to report:

· The receipt of the order from the customer (New Option Order event)
· The route of the order to the exchange (Option Order Route event)
  In Phase 2d, the MOOR event should also include *handlingInstructions* values 'DIR' (Directed Orders) and 'FB' (Cboe Options Floor Broker) to denote the route to Floor Broker.

Industry Member Floor Broker is required to report:

· The receipt of the order from the exchange (Option Order Accepted event)
· The route of the order to the exchange to electronically trade or book (Option Order Route event must have a *timeInForce* value that is not 'IOR' (Immediate or Return))

Cboe Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Customer electronically sends an options order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*Broker 1 reports a* **New Option Order event** type: MONO orderKeyDate: 20180516T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133031.1234 deptType: A side: SL price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: firmDesignatedID: CUS98765 accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	
3	Broker 1 routes the order through the Cboe Options exchange to Floor Broker	*Broker 1 reports an* **Option Order Route event** type: MOOR orderKeyDate: 20180516T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133031.1684 senderIMID: BRKR01 destination: CBOE destinationType: E routedOrderID: RT555 session: ABCD1234 side: SL price: 6.60 quantity: 30 orderType: LMT	In Phase 2d, Broker 1 will be required to report *handlingInstructions* 'DIR' and 'FB' in its MOOR event to the exchange indicating that the order was directed to a Cboe Options floor broker.

#	Step	Reported Event	Comments
		timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: exchOriginCode: C affiliateFlag: false openCloseIndicator: Open	
4	Cboe Options exchange accepts the order from Broker 1	*Exchange reports a Participant **Simple Option Order Accepted event***	
5	Cboe Options exchange routes the order to Floor Broker	*Exchange reports a Participant **Option Route event***	
6	Floor Broker accepts the order from the Cboe Options exchange	*Floor Broker reports an **Option Order Accepted event*** type: MOOA orderKeyDate: 20180516T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133032.1684 receiverIMID: FBRKR senderIMID: CBOE senderType: E routedOrderID: RT0789 deptType: T side: SL price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG affiliateFlag: false openCloseIndicator: Open	
7	Floor Broker routes the order through the Cboe Options exchange to the exchange matching engine so that the order can electronically trade or book (e.g., when using a PAR Workstation, Floor Broker hits the	*Floor Broker reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133033.4684 senderIMID: FBRKR destination: CBOE	Since Floor Broker is seeking to trade or book the order which would relinquish control of the order to the matching engine, the *timeInForce* field must not be populated as 'IOR'.

#	Step	Reported Event	Comments
	"book" button)	destinationType: E routedOrderID: RT4210 session: EFGH4567 side: SL price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open	
8	Cboe Options exchange accepts the option order from Floor Broker into the exchange matching engine	*Exchange reports a Participant **Order from Floor Broker** event*	
9	Cboe Options exchange matching engine executes the full quantity of the option order	*Exchange reports a Participant **Simple Option Trade** event*	

7.2.2. Cboe Options Floor Broker Receives and Routes an Order to Exchange Matching Engine with Instructions to Return any Unexecuted Portion to the Floor Broker

This scenario illustrates the CAT Phase 2b reporting requirements when a customer order is received manually by an Industry Member Broker 1. The order is systematized by Broker 1 and electronically routed through the Cboe Options exchange systems to an Industry Member Floor Broker.

The Floor Broker then determines to route the order through the Cboe Options exchange systems to the exchange matching engine with instructions to return to the floor broker any remainder of the order that is not immediately executed. The order is then partially executed via the exchange matching engine, and the remainder of the order is returned to the floor broker for further handling and execution in open outcry.

Note that in this scenario "Broker 1" could be an Industry Member located off or on the Cboe Options exchange trading floor, including a floor broker.

Industry Member Broker 1 is required to report:

· The route of the order to the exchange (Option Order Route event)

In Phase 2d, the MOOR event should also include *handlingInstructions* values 'DIR' (Directed Orders) and 'FB' (Cboe Options Floor Broker) to denote the route to Floor Broker.

Industry Member Floor Broker is required to report:

· The receipt of the order from the exchange (Option Order Accepted event)

· The route of the order to the exchange to electronically trade immediately and return any remainder (Option Order Route event with a *timeInForce* value of 'IOR')

Cboe Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Customer calls in an option order to Broker 1	*NA*	
2	Broker 1 manually receives the customer order	*NA*	In Phase 2b, Industry Members are not required to report orders received manually (or the systematization of such orders).
3	Broker 1 systematizes the order in its EMS and routes the order through the Cboe Options exchange to the floor broker	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133031.1684 senderIMID: BRKR01	In Phase 2d, Broker 1 will be required to report *handlingInstructions* 'DIR' and 'FB' in its MOOR event to the exchange indicating that the order was directed to a Cboe Options floor broker.

#	Step	Reported Event	Comments
		destination: CBOE destinationType: E routedOrderID: RT555 session: ABCD1234 side: SL price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: exchOriginCode: C affiliateFlag: false openCloseIndicator: Open priorUnlinked: M	
4	Cboe Options exchange accepts the order from Broker 1	*Exchange reports a Participant* ***Simple Option Order Accepted event***	
5	Cboe Options exchange routes the order to the floor broker	*Exchange reports a Participant* ***Option Route event***	
6	Floor broker accepts the order from the Cboe Options exchange	*Floor Broker reports an* ***Option Order Accepted event*** type: MOOA orderKeyDate: 20180516T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133032.1684 receiverIMID: FBRKR senderIMID: CBOE senderType: E routedOrderID: RT0789 deptType: T side: SL price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG affiliateFlag: false openCloseIndicator: Open	
7	Floor broker routes the order through the Cboe Options exchange to	*Floor Broker reports an* ***Option Order Route event***	The floor broker is required to report a *timeInForce* value of 'IOR' indicating that the order routed to the

#	Step	Reported Event	Comments
	the exchange matching engine with instructions to return any remainder of the order that is not immediately executed (e.g., when using a PAR Workstation, the floor broker hits the "TA" or "TB" or "Sweep" button)	type: MOOR orderKeyDate: 20180516T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133032.4684 senderIMID: FBRKR destination: CBOE destinationType: E routedOrderID: RT3210 session: EFGH4567 side: SL price: 6.60 quantity: 30 orderType: LMT timeInForce: IOR tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open	Cboe Options exchange as immediate or return.
8	Cboe Options exchange accepts the order from the floor broker into the exchange matching engine	*Exchange reports a Participant Order from Floor Broker event*	
9	Cboe Options exchange matching engine partially executes the order	*Exchange reports a Participant Simple Option Trade event*	
10	Cboe Options exchange returns the remainder of the order to the floor broker	*Exchange reports a Participant Order Return to Floor Broker event*	

7.2.3.   Industry Member Cancels a Route to a Cboe Options Floor Broker

This scenario illustrates the CAT Phase 2b reporting requirements when Industry Member Broker 1 receives a simple electronic options order from a customer, and routes the order through the Cboe Options exchange systems to an Industry Member Floor Broker. Broker 1 then determines to cancel the route that was sent to the Floor Broker, and directs the route cancel instruction through the exchange machine engine to Floor Broker. Floor Broker cancels the order on its books and records, and subsequently cancels the order on the matching engine.

In this scenario, the order remains open on Broker 1's books and records for further handling. Route cancellations are not required to be reported in Phase 2b.

Note that in this scenario "Broker 1" could be an Industry Member located off or on the Cboe Options exchange trading floor, including a floor broker.

Industry Member Broker 1 is required to report:

·   The receipt of the order from the customer (New Option Order event)
·   The route of the order to the exchange (Option Order Route event)

  In Phase 2d, the MOOR event should also include *handlingInstructions* values 'DIR' (Directed Orders) and 'FB' (Cboe Options Floor Broker) to denote the route to Floor Broker.

Industry Member Floor Broker is required to report:

·   The receipt of the order from the exchange (Option Order Accepted event)
·   The cancellation of the order (Option Order Cancelled event)

Cboe Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Customer electronically sends an option order to Broker 1	*NA*	
2	Broker 1 originally receives the customer order	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20180516T000000 orderID: O54321 optionID: ABCD 190215C00062500	

#	Step	Reported Event	Comments
		eventTimestamp: 20180516T133031.1234 deptType: A side: SL price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: firmDesignatedID: CUS98765 accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	
3	Broker 1 electronically routes the order through the Cboe Options exchange to the floor broker	*Broker 1 reports an* **Option Order Route event** type: MOOR orderKeyDate: 20180516T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133031.1684 senderIMID: BRKR01 destination: CBOE destinationType: E routedOrderID: RT555 session: ABCD1234 side: SL price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: exchOriginCode: C affiliateFlag: false openCloseIndicator: Open	In Phase 2d, Broker 1 will be required to report *handlingInstructions* 'DIR' and 'FB' in its MOOR event to the exchange indicating that the order was directed to a Cboe Options floor broker.
4	Cboe Options exchange accepts the order from Broker 1	*Exchange reports a Participant* **Simple Option Order Accepted event**	
5	Cboe Options exchange routes the order to Floor Broker	*Exchange reports a Participant* **Option Route event**	

#	Step	Reported Event	Comments
6	Floor Broker accepts the order from the Cboe Options exchange	*Floor Broker reports an **Option Order Accepted event*** type: MOOA orderKeyDate: 20180516T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133032.1684 receiverIMID: FBRKR senderIMID: CBOE senderType: E routedOrderID: RT0789 deptType: T side: SL price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG affiliateFlag: false openCloseIndicator: Open	
7	Broker 1 cancels the route to the floor broker through the exchange	*NA*	Deferred – event not required for Phase 2b. SROs will evaluate need for a cancelled route event after reviewing Phase 2b data and include event in Phase 2d, if necessary.
8	Cboe Options exchange receives Broker 1's request to cancel the order and passes the request to the floor broker	*Exchange reports a Participant **Option Cancel Route event***	
9	Floor Broker receives the cancel request and cancels the order on its books and records (e.g., Floor Broker cancels the order on the PAR Workstation)	*Floor Broker reports an **Option Order Cancelled event*** type: MOOC orderKeyDate: 20180516T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133038.4684 manualFlag: false cancelQty: 10 leavesQty: 0 initiator: C	

#	Step	Reported Event	Comments
10	Order is cancelled on Cboe Options exchange system	*Exchange reports a Participant **Option Order Cancelled event***	

7.2.4. Cboe Options Floor Broker Manually Trades an Options Order in Open Outcry

This scenario illustrates the CAT Phase 2b reporting requirements when Industry Member Broker 1 receives a simple electronic options order from a customer, and directs the order through the Cboe Options exchange systems to an Industry Member Floor Broker. Floor Broker represents the order to the crowd in open outcry, and Market Maker 1 trades against the order (i.e., the order is manually executed by the floor broker with Market Maker 1 in open outcry). The execution is then communicated to the exchange for trade reporting.

Note that in this scenario "Broker 1" could be an Industry Member located off or on the Cboe Options exchange trading floor, including a floor broker.
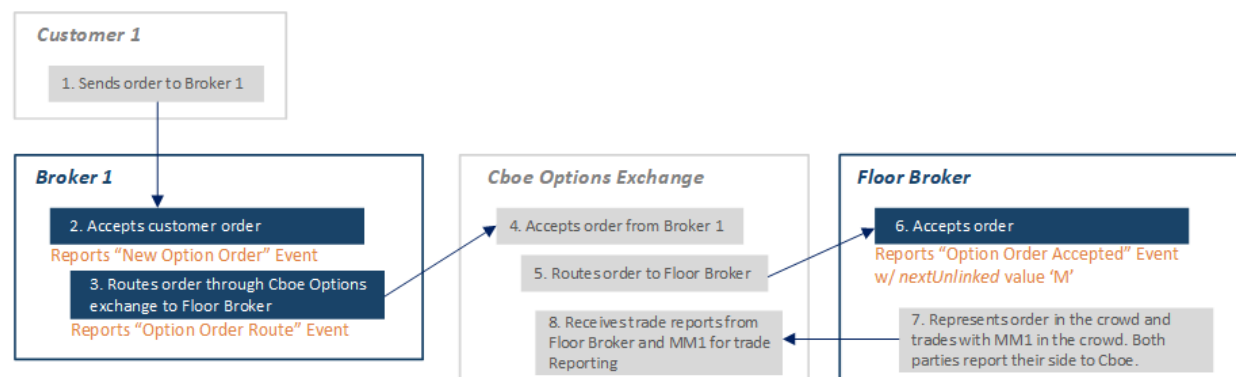
Industry Member Broker 1 is required to report:

- · The receipt of the option order from the customer (New Option Order event)
- · The route of the order to the exchange (Option Order Route event)

  In Phase 2d, the MOOR event should also include *handlingInstructions* values 'DIR' (Directed Orders) and 'FB' (Cboe Options Floor Broker) to denote the route to Floor Broker.

Industry Member Floor Broker is required to report:

- · The receipt of the order from the exchange (Option Order Accepted event)

As part of defining the reporting requirements for manual events in Phase 2d, the Plan Participants are evaluating how Floor Broker and Market Maker 1 will be required to report open outcry verbal/manual options trade and trade reporting events linked to the Cboe Options exchange's Simple Option Trade event.

Cboe Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Customer electronically sends an option order to Broker 1	NA	
2	Broker 1 receives the customer order	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20180516T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133031.1234 deptType: A side: SL price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: firmDesignatedID: CUS98765 accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	
3	Broker 1 directs the order through the Cboe Options exchange to the floor broker	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133031.1684 senderIMID: BRKR01 destination: CBOE destinationType: E routedOrderID: RT555 session: ABCD1234 side: SL price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20180516	In Phase 2d, Broker 1 will be required to report *handlingInstructions* 'DIR' and 'FB' in its MOOR event to the exchange indicating that the order was directed to a Cboe Options floor broker.

#	Step	Reported Event	Comments
		tradingSession: REG handlingInstructions: exchOriginCode: C affiliateFlag: false openCloseIndicator: Open	
4	Cboe Options exchange accepts the order from Broker 1	*Exchange reports a Participant **Simple Option Order Accepted event***	
5	Cboe Options exchange routes the order to Floor Broker	*Exchange reports a Participant **Option Route event***	
6	Floor Broker accepts the order from the Cboe Options exchange	*Floor Broker reports an **Option Order Accepted event*** type: MOOA orderKeyDate: 20180516T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20180516T133032.1684 receiverIMID: FBRKR senderIMID: CBOE senderType: E routedOrderID: RT0789 deptType: T side: SL price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG affiliateFlag: false openCloseIndicator: Open nextUnlinked: M	The *nextUnlinked* flag must be populated with a value of 'M' to indicate that the immediately following event is not reportable, as is it is a manual event. Alternatively, if the *nextUnlinked* value is unknown at the time of order receipt, a separate Option Order Supplement event may be reported to capture the *nextUnlinked* value.
7	Floor Broker represents the order in the crowd and trades it in the crowd with Market Maker 1. Floor Broker and Market Maker 1 both subsequently report their respective sides of the execution to Cboe Options exchange	*NA*	In Phase 2b, Floor Broker and Market Maker 1 are not required to report open outcry verbal/manual executions. Note that the representation of the order (e.g., the 'Represent' button on Floor Broker's PAR Workstation) is not a CAT reportable event.
8	Cboe Options exchange receives trade reports from Floor Broker and	*Exchange reports a Participant **Simple Option Trade event***	

| #	Step	Reported Event	Comments
	Market Maker 1 for trade reporting		

7.2.5. Cboe Options Floor Broker Manually Routes the Equity Leg of a Complex Option Order to another Industry Member

This scenario illustrates the CAT Phase 2a reporting requirements when Industry Member Broker 1 receives a complex order with an equity buy leg from a customer, and directs the order through the Cboe Options exchange systems to an Industry Member Floor Broker.

The Floor Broker represents the complex order with the equity leg to the crowd, and trades the complex order with Market Maker 1 at a net price, with the execution of the options legs at a given price being contingent on the execution of the equity leg at a given price. Upon determining the price of the equity leg, both Floor Broker and Market Maker 1 each separately route their respective sides of the equity leg to Broker 2, who crosses the equity orders.

This scenario illustrates the requirements for reporting the equity leg of a complex order in Phase 2a, and does not include reporting requirements for the option legs, which will not be reportable until Phase 2d. Refer to CAT FAQ B12 for additional information.

Note that in this scenario "Broker 1" could be an Industry Member located off or on the Cboe Options exchange trading floor, including a floor broker.
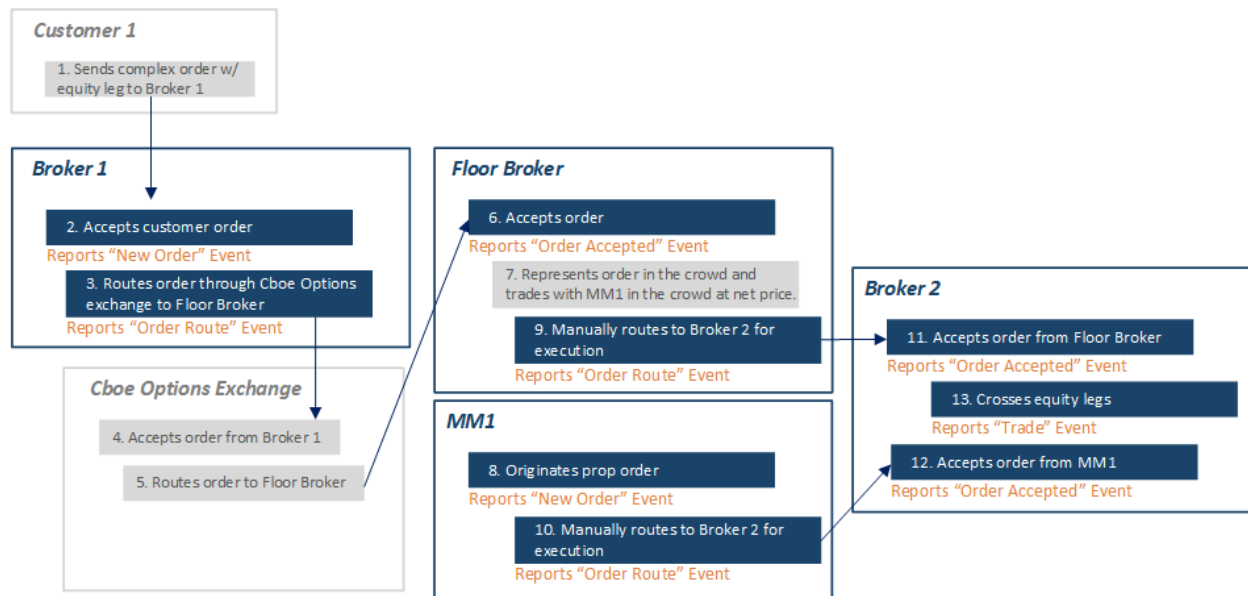
Industry Member Broker 1 is required to report:

- The receipt of the equity leg buy order from the customer (New Order event with *handlingInstructions* 'OPT')
- The route of the equity leg buy order to the exchange (Order Route event with *handlingInstructions* 'OPT')
  In Phase 2c, the MOOR event should also include *handlingInstructions* values 'DIR' (Directed Orders) and 'FB' (Cboe Options Floor Broker) to denote the route to Floor Broker.

Industry Member Floor Broker is required to report:

- The receipt of the equity leg buy order from the exchange (Order Accepted event with *handlingInstructions* 'OPT')
- The route of the equity leg buy order to Broker 2 (Order Route event with *handlingInstructions* 'OPT')

Industry Member Market Maker 1 is required to report:

- A new proprietary sell equity leg sell order (New Order event with *handlingInstructions* 'OPT')
- The route of the equity leg sell order to Broker 2 (Order Route event with *handlingInstructions* 'OPT')

Industry Member Broker 2 is required to report:

- The receipt of the buy order from Floor Broker (Order Accepted event with *handlingInstructions* 'OPT')
- The receipt of the sell order from Market Maker 1 (Order Accepted event with *handlingInstructions* 'OPT')
- The execution of the orders from Floor Broker and Market Maker 1 (Trade event)

Cboe Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Customer sends a complex order with an equity leg to Broker 1	*NA*	
2	Broker 1 accepts the complex order with an equity leg	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: CO12345 symbol: XYZ eventTimestamp: 20180417T153035.123456 manualFlag: false	In Phases 2a and 2c, since the customer order is an equity leg of a complex option that contains a net price, Broker 1 must report an *orderType* of 'MKT', a blank *price*, and a *handlingInstructions* value of 'OPT'. CAT will interpret this combination of values as an order containing a net price. In Phase 2d, Broker 1 will be required to report a net price.

#	Step	Reported Event	Comments
		deptType: A side: B price: quantity: 200 orderType: MKT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: OPT custDspIntrFlag: false firmDesignatedID: INS345 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	The option leg(s) of the complex order is not reportable until Phase 2d.
3	Broker 1 routes the complex order with an equity leg through the Cboe Options exchange to Floor Broker	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: CO12345 symbol: XYZ eventTimestamp: 20180417T153035.553456 manualFlag: false senderIMID: BRKA destination: CBOE destinationType: E routedOrderID: RTCO12345 session: ABCD1234 side: B price: quantity: 200 orderType: MKT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: OPT	While *handlingInstructions* are generally not required on Order Route events until Phase 2c, Broker 1 must report a *handlingInstructions* value of 'OPT' so the route is not reflected in CAT as the route of an ordinary market order. In Phase 2d, Broker 1 will be required to report a net price. The option leg(s) of the complex order is not reportable until Phase 2d.
4	Cboe Options exchange accepts the complex order with an equity leg from Broker 1	*Exchange reports a Participant **Complex Option Order Accepted event** and **Stock Leg Order event***	
5	Cboe Options exchange routes the complex order with an equity leg to Floor Broker	*Exchange reports a Participant **Equity Order Route event***	

#	Step	Reported Event	Comments
6	Floor Broker accepts the complex order with equity leg from the Cboe Options exchange	*Floor Broker reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: RTB910 symbol: XYZ eventTimestamp: 20180417T153035.853456 manualFlag: false receiverIMID: FBRKR senderIMID: CBOE senderType: E routedOrderID: RTCO45678 affiliateFlag: false deptType: T side: B price: quantity: 200 orderType: MKT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	The floor broker is required to report a *handlingInstructions* value of 'OPT'.to indicate that the order is an options related order. In Phase 2d, Floor Broker will be required to report a net price. The option leg(s) of the complex order is not reportable until Phase 2d.
7	Floor Broker represents the complex order, including the equity leg, to the crowd and trades the customer complex order in the crowd with Market Maker 1. Floor Broker and Market Maker 1 both subsequently report their respective sides of the options legs executions to Cboe Options exchange	*NA*	In Phase 2b, Floor Broker and Market Maker 1 are not required to report open outcry verbal/manual executions. Note that the representation of the order (e.g., the 'Represent' button on Floor Broker's PAR Workstation) is not a CAT reportable event.
8	Market Maker 1 manually originates a proprietary new equity leg order	*Market Maker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: MM65432 symbol: XYZ eventTimestamp: 20180417T153037.153456 manualFlag: true	Market Maker 1 is required to report a *handlingInstructions* value of 'OPT' to indicate that the order is an options related order.

#	Step	Reported Event	Comments
		deptType: T side: SL price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: OPT custDspIntrFlag: false firmDesignatedID: INS345 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
9	Floor Broker calls/manually routes the order to Broker 2 for execution	*Floor Broker reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: RTB910 symbol: XYZ eventTimestamp: 20180417T153037.653456 manualFlag: true senderIMID: FBRKR destination: BRK2 destinationType: F routedOrderID: RTCO65432 side: B price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	Since Floor Broker has assigned a price to the equity leg, the *price* field must be populated. In Phase 2c, Floor Broker is required to report a *handlingInstructions* value of 'OPT' to indicate that the order is an options related order.
10	Market Maker 1 calls/manually routes the equity leg order to Broker 2 for execution	*Market Maker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: MM65432 symbol: XYZ eventTimestamp: 20180417T153037.653456	Since a price has been assigned to the equity leg, the *price* field must be populated. In Phase 2c, Market Maker 1 is required to report a *handlingInstructions* value of 'OPT' to indicate that the order is an options related order.

#	Step	Reported Event	Comments
		manualFlag: true senderIMID: MM1 destination: BRK2 destinationType: F routedOrderID: RTCO98765 side: SL price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
11	Broker 2 manually accepts the equity leg order from Floor Broker	*Broker 2 reports an* **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000 orderID: ORD123 symbol: XYZ eventTimestamp: 20180417T153037.853456 manualFlag: true receiverIMID: BRK2 senderIMID: FBRKR senderType: F routedOrderID: RTCO65432 affiliateFlag: false deptType: T side: B price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	Broker 2 is required to report a *handlingInstructions* value of 'OPT' to indicate that the order is an options related order.
12	Broker 2 manually accepts the equity leg order from Market Maker 1	*Broker 2 reports an* **Order Accepted event** type: MEOA orderKeyDate: 20180417T000000 orderID: ORD456 symbol: XYZ	Broker 2 is required to report a *handlingInstructions* value of 'OPT' to indicate that the order is an options related order.

#	Step	Reported Event	Comments
		eventTimestamp: 20180417T153037.853456 manualFlag: true receiverIMID: BRK2 senderIMID: MM1 senderType: F routedOrderID: RTCO98765 affiliateFlag: false deptType: T side: SL price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	
13	Broker 2 crosses the Buy and Sell equity leg orders	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ123 symbol: XYZ eventTimestamp: 20180417T153039.853456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 200 price: 10.00 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: ORD123 side: B sellDetails: orderKeyDate: 20180417T000000 orderID: ORD456 side: SL	

In the scenario above, upon determining the price of the equity leg, both Floor Broker and Market Maker 1 each separately route their respective sides of the equity leg to Broker 2, who crosses the equity orders. Another common scenario that occurs is one where Market Maker 1 would ask Floor Broker to route Market Maker 1's side of the equity leg to Broker 2 on Market Maker 1's behalf. In that scenario, Floor Broker would route both Floor Broker's buy-side equity leg and Market Maker 1's sell-side equity leg to Broker 2 for execution. In that scenario, if everything else about the fact pattern remains the same, the following events would be reported in Phase 2a:

Industry Member Broker 1 is required to report:

- The receipt of the equity leg buy order from the customer (New Order event with *handlingInstructions* 'OPT')
- The route of the equity leg buy order to the exchange (Order Route event with *handlingInstructions* 'OPT'; in Phase 2d, the event should also include the following additional handling instructions to denote the route to the floor broker: *handlingInstructions* 'DIR' and 'FB')

Industry Member Floor Broker is required to report:

- The receipt of the equity leg buy order from the exchange (Order Accepted event with *handlingInstructions* 'OPT')
- The receipt of the equity leg sell order from Market Maker 1 (Order Accepted event with *handlingInstructions* 'OPT')
- The route of the equity leg buy order to Broker 2 (Order Route event with *handlingInstructions* 'OPT')
- The route of the equity leg sell order to Broker 2 (Order Route event with *handlingInstructions* 'OPT')

Industry Member Market Maker 1 is required to report:

- A new proprietary equity leg sell order (New Order event with *handlingInstructions* 'OPT')
- The route of the equity leg sell order to Floor Broker (Order Route event with *handlingInstructions* 'OPT')

Industry Member Broker 2 is required to report:

- The receipt of the equity leg buy order from Floor Broker (Order Accepted event with *handlingInstructions* 'OPT')
- The receipt of the equity leg sell order from Floor Broker (Order Accepted event with *handlingInstructions* 'OPT')
- The execution of the orders from Floor Broker (Trade event)

Cboe Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.