CAT Industry Member Reporting Scenarios

9/21/2021

Version 4.6

Table of Contents

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 Phase 2d.

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. The Participants propose to seek a modification of the requirements of the CAT NMS Plan from 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.

An archived version of the revision/change log detailing changes to previous versions of this document is available at www.catnmsplan.com.

Version	Date	Author	Description
4.0	2/5/21	Consolidated Audit Trail, LLC	Initial Publication for Phase 2d Updated executive summary language Updated modification/cancellation scenarios to add new events and requirements Updated allocation scenarios with new requirements Added *pairedOrderID* to relevant scenarios Moved Scenario 2.5.6 to 2.1.7 Retired scenarios 3.1.4 and 3.1.5
4.1	3/5/21	Consolidated Audit Trail, LLC	Updated requirements for Section 2.8 Updated Scenarios 2.4.6 – 2.4.8

Version	Date	Author	Description
			Updated Scenarios in Section 2.8 with Phase 2d guidance
			Updated Scenarios in Section 3.7 with Phase 2d guidance
			Updated Scenarios in Section 6 with Phase 2d guidance
			Updated Scenarios in Section 8.2 with Phase 2d guidance
			Updated Scenarios 2.6.6, 2.6.8 and 2.12.1 with new guidance for unsolicited cancels
			Moved Scenario 3.8.1 to 3.7.4
			Moved Scenario 2.16.5 to 3.7.5
			Retired Scenarios 2.17.2 – 2.17.3
4.2	4/5/21	Consolidated Audit Trail, LLC	Made conforming changes with v3.11
			Added Scenarios 3.6.5 and 3.6.6
			Corrected description, graphics, and *handlingInstructions* in Scenarios 2.8.3 and 2.8.7
			Added *priceType* and *multiLegInd* to Multi-Leg scenarios
			Corrected graphic in Scenarios 3.6.2, 3.6.3 and 3.7.5
			Updated timestamp requirements for MEMR/MECR scenarios (conforming change with v4.0.0 r8)
4.3	5/21/21	Consolidated Audit Trail, LLC	Made conforming changes with v3.12
			Added Scenarios 2.8.8 – 2.8.10
			Corrected/Clarified Scenarios 2.6.1, 3.7.4- 3.7.5 and 8.2.2-8.2.4
4.4	6/18/21	Consolidated Audit Trail, LLC	Updated requirements in Section 8.2 and added MOOT events
			Added new Scenario 3.7.4, moved existing Scenario 3.7.4 to 3.7.5 and Scenario 3.7.5 to 3.7.6.
			Corrected *accountHolderType* in Scenario 3.2.1
4.5	7/16/21	Consolidated Audit Trail, LLC	Added Section 4.2 Options Error Account Scenarios
			Added Scenarios 3.6.8 and 3.6.9
			Updated steps for Scenario 8.3.2
			Updated *electronicTimestamp* and added *accountHolderType* on MOOT events in Section 8.2 and 8.3
			Added *pairedOrderID* to Order Accepted events
4.6	9/21/2021	Consolidated Audit Trail, LLC	Removed *handlingInstructions* value of 'SMT' from Scenario 2.1.7
			Updated description, graphics and *handlingInstructions* in Scenario 2.5.4
			Removed *leavesQty* field from Route Cancelled and Route Modified events in all scenarios that include these events
			Updated graphic/steps in Scenario 2.6.7
			Updated graphic/steps in Scenario 2.12.2

Version	Date	Author	Description
			Added *multiLegInd* field to MEOTS scenarios 2.7.2 and 2.7.3
			Corrected graphic/steps in Scenario 3.6.8
			Corrected dates in Scenario 4.2.4
			Updated requirements in Section 6
			Added PHLX and AMEROP floor broker scenarios
			Updated scenarios 2.16.2, 3.6.6, 3.6.7, 3.7.6, 8.2.5, 8.3.1, 8.3.2 to reflect current guidance on Paired Orders

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.
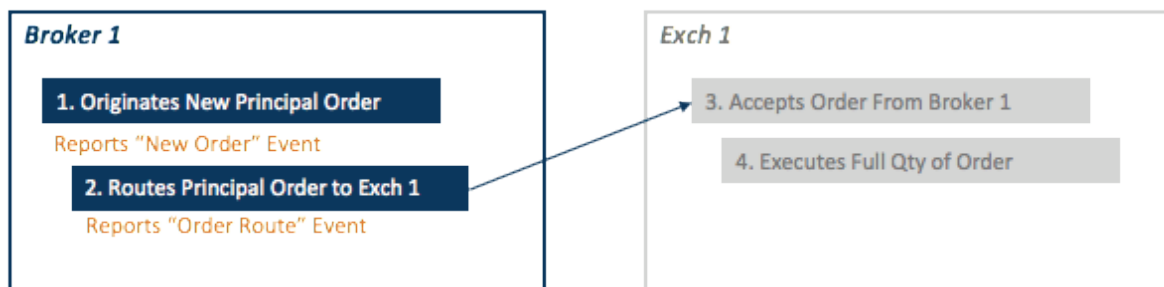
Industry Member Broker 1 is required to report:

- 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: 123: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. The *senderIMID* field must be populated using the format <CRD>:<IMID> as described in the IM Technical Specifications in order to manage IMID conflicts.
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.
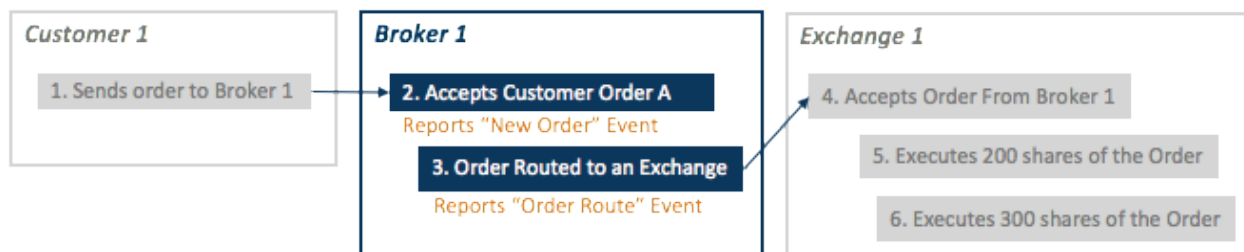
Industry Member Broker 1 is required to report:

- 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. 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: 123: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: RAR	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. The *senderIMID* field must be populated using the format <CRD>:<IMID> as described in the IM Technical Specifications in order to manage IMID conflicts.
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: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: AO222 side: B price: 10.00 quantity: 1000	Both the *senderIMID* and *destination* fields must be populated using the format <CRD>:<IMID> as described in the IM Technical Specifications in order to manage IMID conflicts.

#	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: 20180417T153031.323556 manualFlag: false receiverIMID: 456:FRMB senderIMID: 123: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	Both the *senderIMID* and *receiverIMID* fields must be populated using the format <CRD>:<IMID> as described in the IM Technical Specifications in order to manage IMID conflicts.
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: 20180417T153031.324556 manualFlag: false senderIMID: 456: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. The *senderIMID* field must be populated using the format <CRD>:<IMID> as described in the IM Technical Specifications in order to manage IMID conflicts.

#	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.
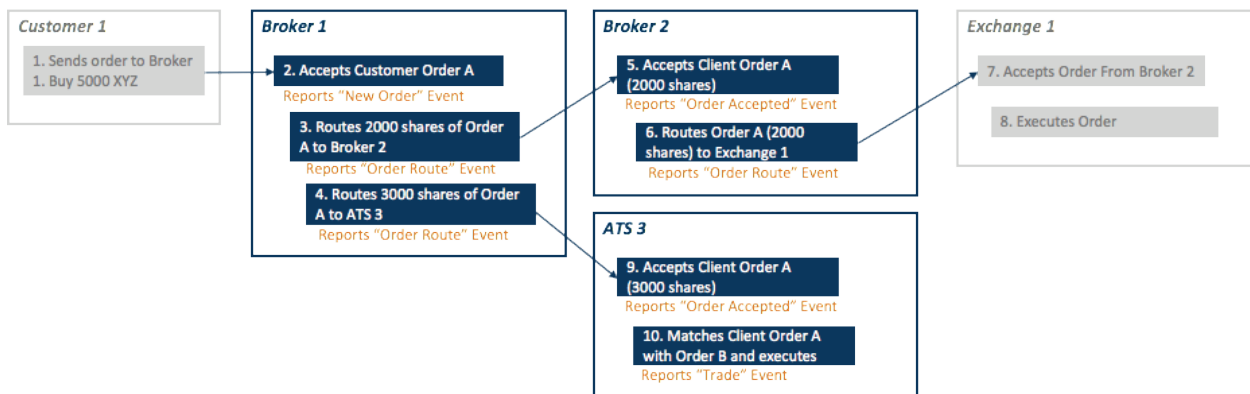
Industry Member Broker 1 is required to report:

- 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: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: ABO4561 side: B price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	Both the *senderIMID* and *destination* fields must be populated using the format <CRD>:<IMID> as described in the IM Technical Specifications in order to manage IMID conflicts.

#	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: 123:FRMA destination: 987:ATSC destinationType: F routedOrderID: ACO4562 side: B price: 10.00 quantity: 3000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	Both the *senderIMID* and *destination* fields must be populated using the format <CRD>:<IMID> as described in the IM Technical Specifications in order to manage IMID conflicts.
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: 456:FRMB senderIMID: 123: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	Both the *senderIMID* and *receiverIMID* fields must be populated using the format <CRD>:<IMID> as described in the IM Technical Specifications in order to manage IMID conflicts.

#	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: 456: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. The *senderIMID* field must be populated using the format <CRD>:<IMID> as described in the IM Technical Specifications in order to manage IMID conflicts.
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: 987:ATSC senderIMID: 123:FRMA senderType: F routedOrderID: ACO4562 affiliateFlag: false deptType: A side: B	Both the *senderIMID* and *receiverIMID* fields must be populated using the format <CRD>:<IMID> as described in the IM Technical Specifications in order to manage IMID conflicts.

#	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: 123: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: 123: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.
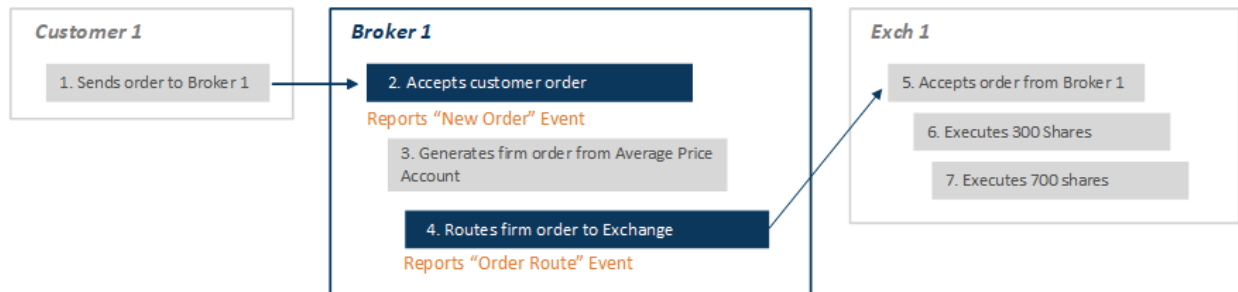
Industry Member Broker 1 is required to report:

- 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 1 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: 123: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***	

2.1.7. 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 routing mechanism 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).
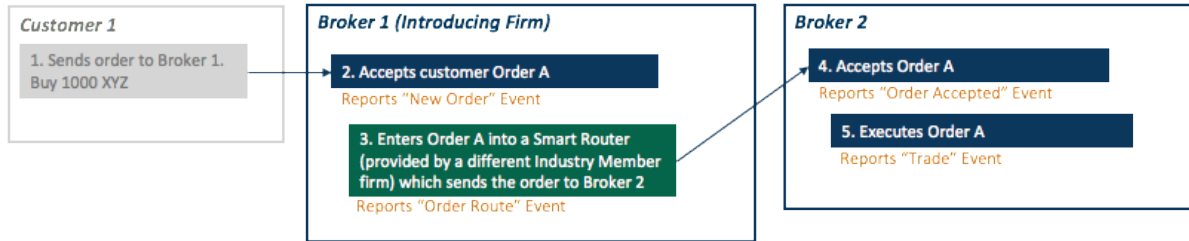
Industry Member Broker 1 is required to report:

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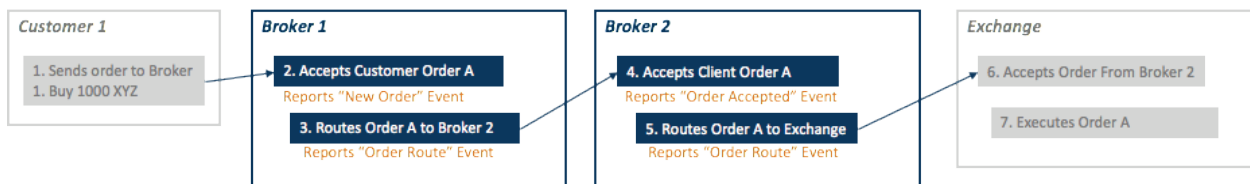- The route of the order through a Smart Router (Order Route event)

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. In accordance with CAT FAQ D35, the *handlingInstructions* value of 'SMT' (Smart Router) has been retired and must not be reported in Phase 2d.

#	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 tradingSession: REG custDspIntrFlag: false firmDesignatedID: FDID358	

#	Step	Reported Event	Comments
		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: 123:BRKR1 destination: 456:BRKR2 destinationType: F routedOrderID: SR1112 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
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: 456:BRKR2 senderIMID: 123:BRKR1 senderType: F routedOrderID: SR1112 affiliateFlag: false deptType: T side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NAcustDspIntrFlag: false	

#	Step	Reported Event	Comments
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	

2.2. 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.
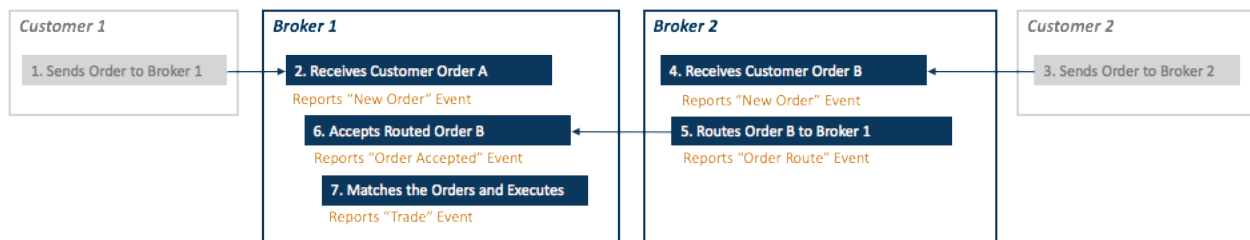
Industry Member Broker 1 is required to report:

- 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	

#	Step	Reported Event	Comments
		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 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: 123:ABCD destination: 456: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	

#	Step	Reported Event	Comments
		eventTimestamp: 20170801T143031.234456 manualFlag: false receiverIMID: 456:FRMA senderIMID: 123:ABCD senderType: F routedOrderID: ABCDXYZ555 affiliateFlag: false deptType: A side: SL price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY=20170801 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	*Broker 1 reports a **Trade event*** type: MEOT	The *buyDetails* reflect the details of customer order O12345. The

#	Step	Reported Event	Comments
	proprietary account	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: 20180416T000000 orderID: O12345 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	*sellDetails* capture the FDID of the firm proprietary account from which the customer order was filled.

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.
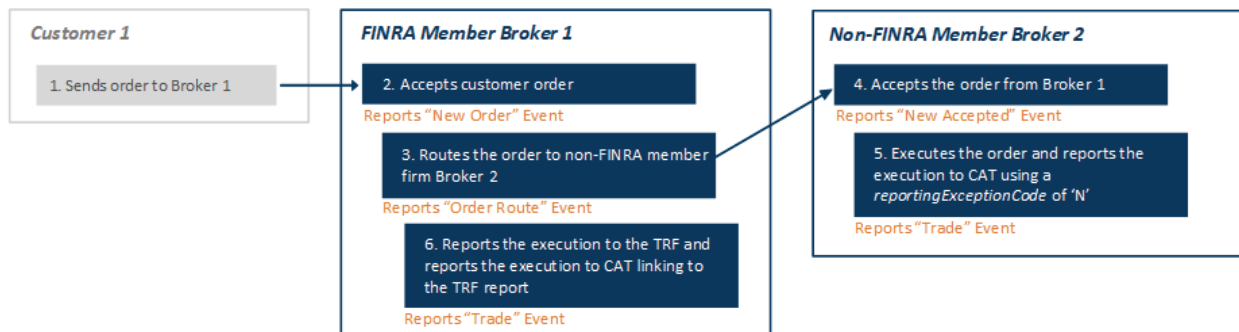
FINRA Member Broker 1 is required to report:

- 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 (Trade event with a *reportingExceptionCode* of 'N' and)

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 *buyDetails* 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 required to report a two sided trade event showing that the order received from Broker 1 was executed in its proprietary account.

#	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	

#	Step	Reported Event	Comments
		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 eventTimestamp: 20170801T143031.134456 manualFlag: false senderIMID: 123:FRMA destination: 456: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: 456:FRMB senderIMID: 123:FRMA senderType: F routedOrderID: ABCDXYZ555 affiliateFlag: false deptType: A side: B price: 10.01 quantity: 300	

#	Step	Reported Event	Comments
		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 eventTimestamp: 20170801T143031.253456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 300 price: 10.01 capacity: P tapeTradeID: marketCenterID: sideDetailsInd: buyDetails: firmDesignatedID: PROP123 accountHolderType: P side: B sellDetails: orderKeyDate: 20170801T000000 orderID: O12347 side: SL reportingExceptionCode: N	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. 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 required to report a two sided trade event showing that the order received from Broker 1 was executed in its proprietary account.
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	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 *buyDetails* are populated.

#	Step	Reported Event	Comments
		tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: BUY buyDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B	

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	

#	Step	Reported Event	Comments
		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 orderKeyDate: 20180416T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180416T153037.234456 manualFlag: false senderIMID: 123: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	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
		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 accountHolderType: P	

2.3. Representative Order Scenarios

This section illustrates the CAT reporting requirements when an Industry Member generates a representative order in a firm account to facilitate a single customer order. Refer to Sections 2.5.8 and 2.11.4 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)

Explicit linkage between the customer order and the representative order is required in the *aggregatedOrders* field on the representative MENO and the *firmDetails* on the MEOF.

The same guidance would apply in a scenario where one or more of the orders being represented was a proprietary order.

#	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	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.

| #	Step	Reported Event	Comments
		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 *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 eventTimestamp: 20170801T143031.123456 manualFlag: false senderIMID: 123: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*	

#	Step	Reported Event	Comments
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: 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. *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.

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.
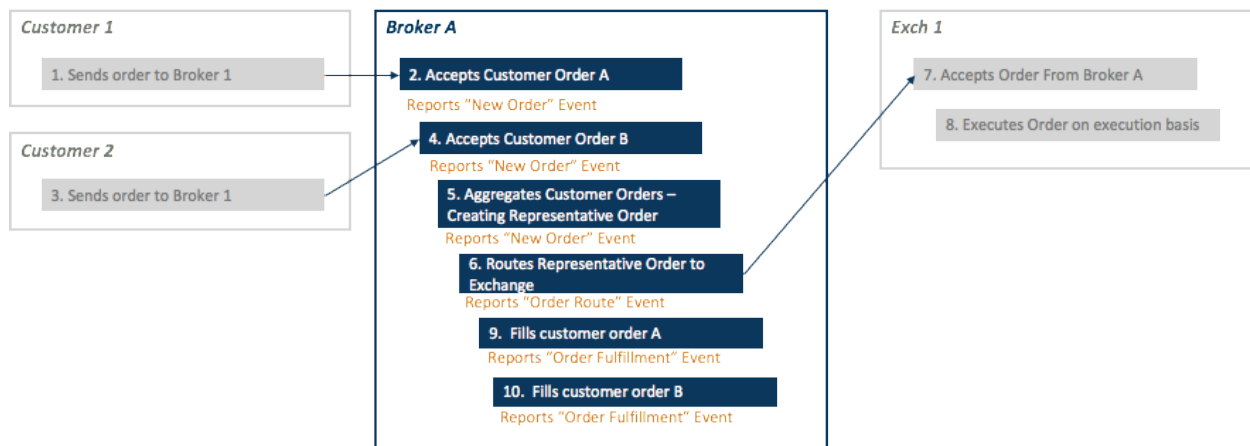
Industry Member Broker A is required to report:

- 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.

Explicit linkage between each customer order and the representative order is required in the *aggregatedOrders* field on the representative MENO and the *firmDetails* in each MEOF.

The guidance outlined in this scenario would also apply when an Industry Member combines multiple customer orders into an aggregated or combined order that is not a "representative proprietary" order.

#	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	

#	Step	Reported Event	Comments
		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 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	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. The *aggregatedOrders* field must be populated with explicit linkage to each customer order.

#	Step	Reported Event	Comments
		timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP123 accountHolderType: P affiliateFlag: false aggregatedOrders: O12345@20170801T000000@@| O12350@20170801T000000@@| negotiatedTradeFlag: false representativeInd: Y	
6	Broker A routes the representative order to an exchange for execution	*Broker A reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: RPO555 symbol: XYZ eventTimestamp: 20170801T143031.623456 manualFlag: false senderIMID: 123:BRKA destination: EXCH1 destinationType: E routedOrderID: S12O555 session: 1112 side: B price: 10.01 quantity: 1200 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	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. *firmDetails* are required.

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20170801T143040.123456 manualFlag: false quantity: 500 price: 10.01 capacity: R fulfillmentLinkType: Y clientDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B firmDetails: orderKeyDate: 20170801T000000 orderID: RPO555 side: SL *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: Y clientDetails: orderKeyDate: 20170801T000000 orderID: O12350 side: B firmDetails: orderKeyDate: 20170801T000000 orderID: RPO555 side: SL	

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.
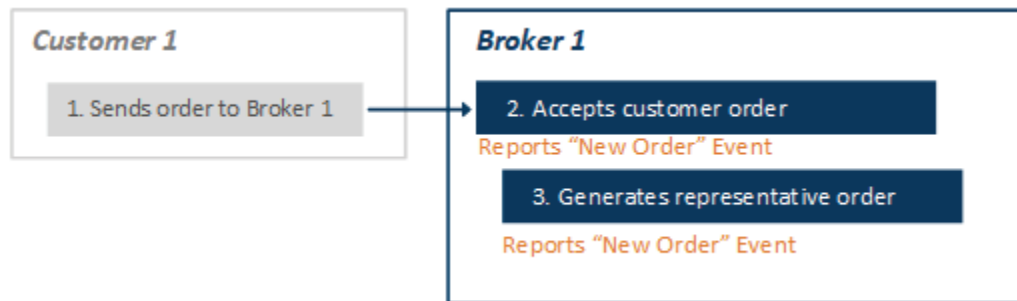
Industry Member Broker 1 is required to report:

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

Explicit linkage between the customer order and the representative order is required in the *aggregatedOrders* field on the representative MENO.

#	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	

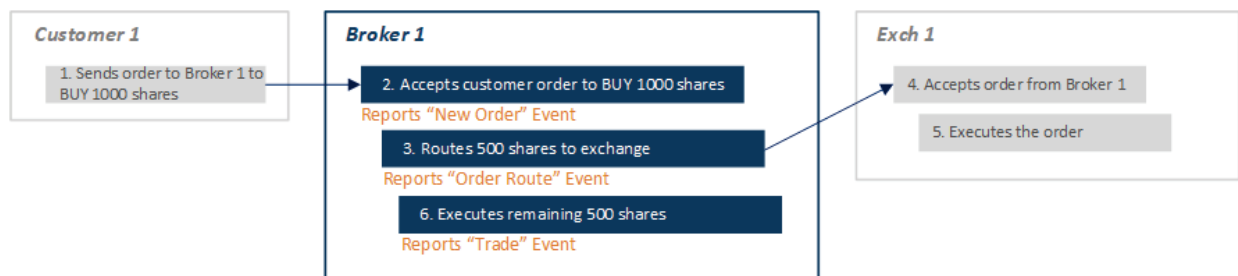| #	Step	Reported Event	Comments
		firmDesignatedID: C12345 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 generates a representative order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12350 symbol: 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. 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.
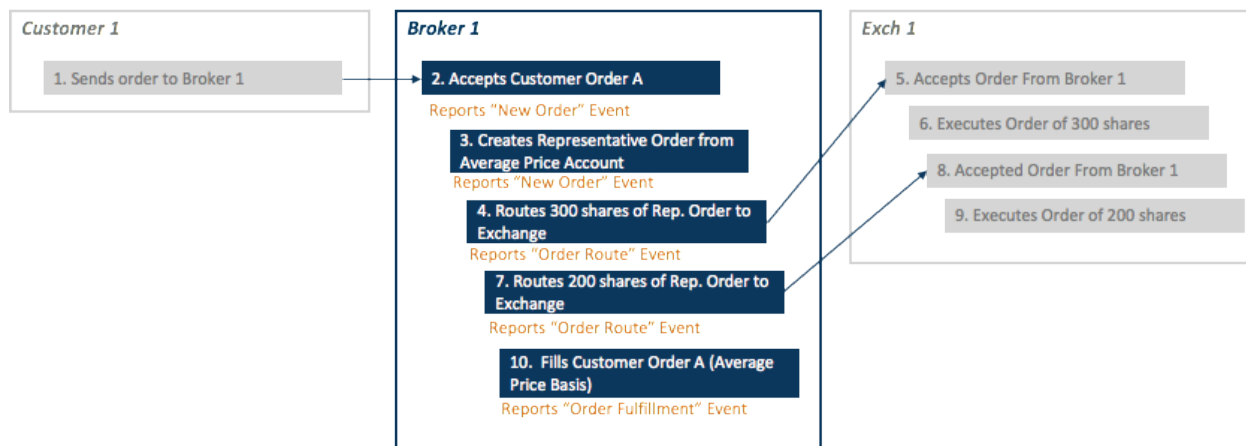
Industry Member Broker 1 is required to report:

- 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)

Explicit linkage between the customer order and the representative order is required in the *aggregatedOrders* field on the representative MENO and the *firmDetails* on the MEOF.

Refer to Scenario 2.1.6 for guidance on reporting requirements when an Industry Member facilitates a single customer order via a firm agency account, commonly referred to as an "agency flip" scenario.

#	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 timeInForce: DAY=20180417 tradingSession: REG	

#	Step	Reported Event	Comments
		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: 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. The *aggregatedOrders* field must be populated.
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: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: s5 side: B	

#	Step	Reported Event	Comments
		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: 123: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 fulfillmentID: AABB1231	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. *firmDetails* are required.

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180417T153037.326456 manualFlag: false fulfillmentLinkType: Y quantity: 500 price: 10.00 capacity: A clientDetails: orderKeyDate: 20180417T000000 orderID: O12345 side: B firmDetails: orderKeyDate: 20180417T000000 orderID: R04826 side: SL	

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

This scenario illustrates the CAT reporting requirements when an Industry Member 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)

Explicit linkage between the customer order and the principal order is required through the *firmDetails* on the MEOF 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: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG	

#	Step	Reported Event	Comments
		affiliateFlag: false isoInd: NA	
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	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. *firmDetails* are required. If the customer order was executed from a firm account and reported as a media trade report to the TRF, Broker 1 would be required to report an MEOT in this step.

#	Step	Reported Event	Comments
		clientDetails: orderKeyDate: 20180501T000000 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.

Explicit linkage between the customer order and the representative order is required in the *aggregatedOrders* field on the representative MENO.

| #	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: O34567@20180501T000000@@ affiliateFlag: false negotiatedTradeFlag: 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. The *aggregatedOrders* field is required to be populated.

#	Step	Reported Event	Comments
		representativeInd: Y	
3	Broker 1 routes the proprietary order to Exch 1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153036.234556 manualFlag: false senderIMID: 123: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	The *buyDetails* reflect the details of customer order O34567. The *sellDetails* reflect the details of representative order O12345.

#	Step	Reported Event	Comments

		sideDetailsInd: NA
		buyDetails:
		    orderKeyDate:
		    20180501T000000
		    orderID: O34567
		    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.
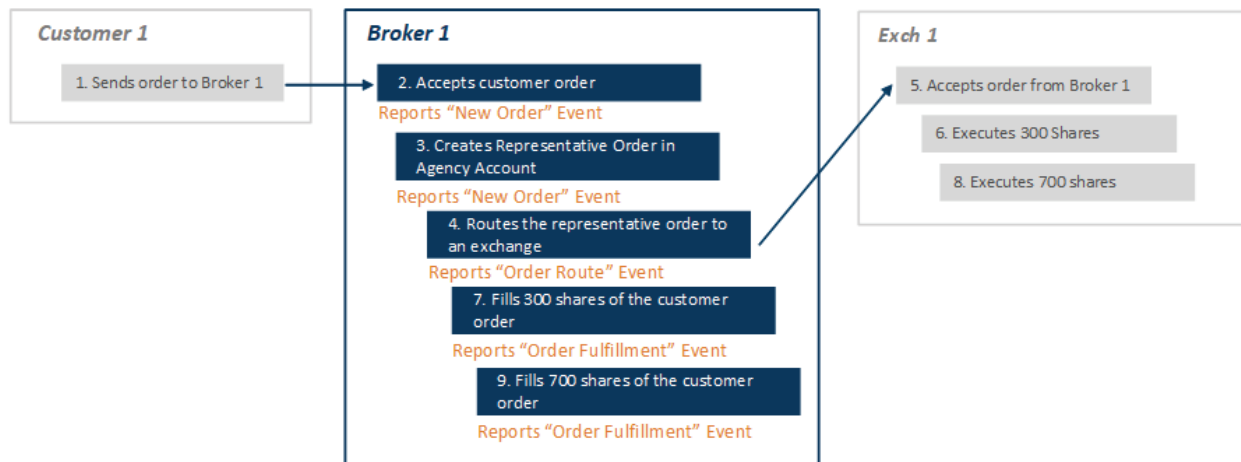
Industry Member Broker 1 is required to report:

- 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)

Explicit linkage between the customer order and the representative order is required in the *aggregatedOrders* field on the representative MENO and the *firmDetails* on each MEOF.

#	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. 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: 12#: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. *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. *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.
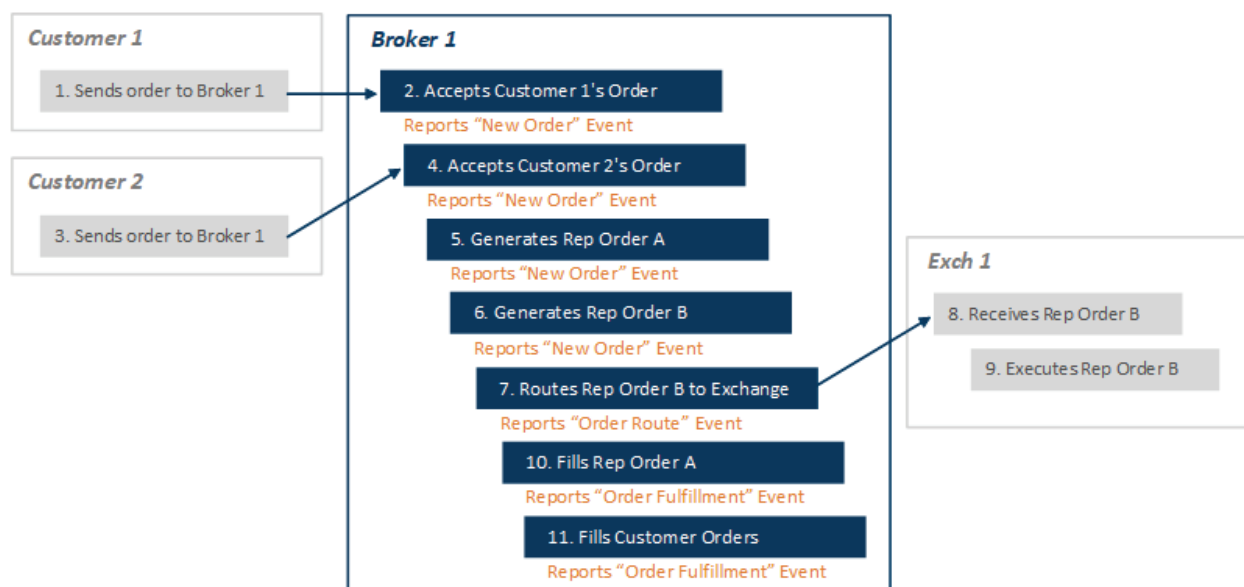
Industry Member Broker 1 is required to report:

- 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 each customer order is required through the *aggregatedOrders* field in the MENO for Representative Order A and the *firmDetails* in each MEOF representing the fill of a customer order.

Explicit linkage between Representative Order A and Representative Order B is required through the *aggregatedOrders* field in the MENO for Representative Order B and the *firmDetails* in the MEOF representing the fill of Representative Order A.

This reporting scenario is applicable when a firm's system 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: O12345@20170801T000000@@| O12350@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. The *aggregatedOrders* field is required to be populated.
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	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. The *aggregatedOrders* field must be populated.

#	Step	Reported Event	Comments
		custDspIntrFlag: false firmDesignatedID: PROP123 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: 123: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	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. *firmDetails* are required.

#	Step	Reported Event	Comments
		fulfillmentLinkType: Y quantity: 1200 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: Y quantity: 500 price: 10.01 capacity: R clientDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B firmDetails: orderKeyDate: 20170801T000000 orderID: AVGO555 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. *firmDetails* are not required.
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	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. *firmDetails* are required.

#	Step	Reported Event	Comments
		eventTimestamp: 20170801T143036.123456 manualFlag: false fulfillmentLinkType: Y quantity: 700 price: 10.01 capacity: R clientDetails: orderKeyDate: 20170801T000000 orderID: O12350 side: B firmDetails: orderKeyDate: 20170801T000000 orderID: AVGO555 side: SL	

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.
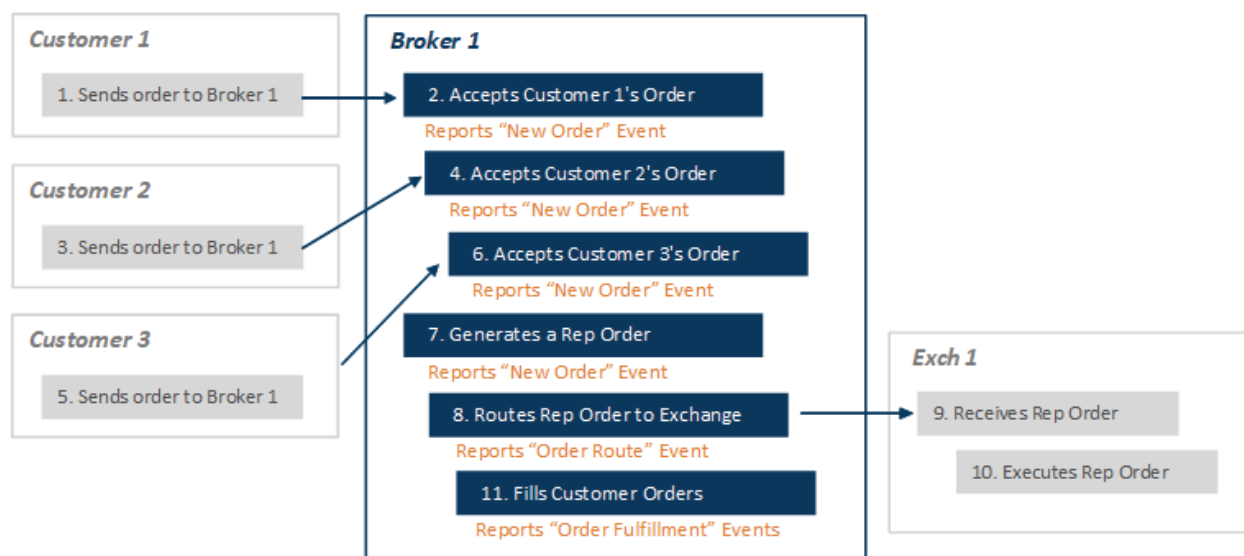
Industry Member Broker 1 is required to report:

- 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. When a *fulfillmentLinkType* value of "YE" is populated, the *firmDetails* 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 *firmDetails* 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*	

#	Step	Reported Event	Comments
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 affiliateFlag: false negotiatedTradeFlag: false	

#	Step	Reported Event	Comments
		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 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	Although Broker 1 is manually entering the order into its EMS, proprietary orders that are simultaneously entered into an OMS/EMS upon origination are always considered electronic. 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.

#	Step	Reported Event	Comments
		accountHolderType: V affiliateFlag: false aggregatedOrders: negotiatedTradeFlag: false representativeInd: YE	
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: 123:BRKA destination: EXCH1 destinationType: E routedOrderID: S12O555 session: 1112 side: B price: 10.01 quantity: 1500 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	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.

#	Step	Reported Event	Comments
		price: 10.01 capacity: A fulfillmentLinkType: YE clientDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B firmDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P *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 price: 10.01 capacity: A fulfillmentLinkType: YE clientDetails: orderKeyDate: 20170801T000000 orderID: O12350 side: B firmDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P *Broker 1 reports an **Order Fulfillment event (3 of 3)*** type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO55502 symbol: XYZ eventTimestamp: 20170801T143040.523456	*firmDetails* are required. Broker 1 must populate the *firmDetails* with the *accountHolderType* and the FDID of the account from which the order was filled.

#	Step	Reported Event	Comments
		manualFlag: true electronicTimestamp: 20170801T143040.523456 quantity: 300 price: 10.01 capacity: A fulfillmentLinkType: YE clientDetails: orderKeyDate: 20170801T000000 orderID: O12355 side: B firmDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	

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 workflow 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.
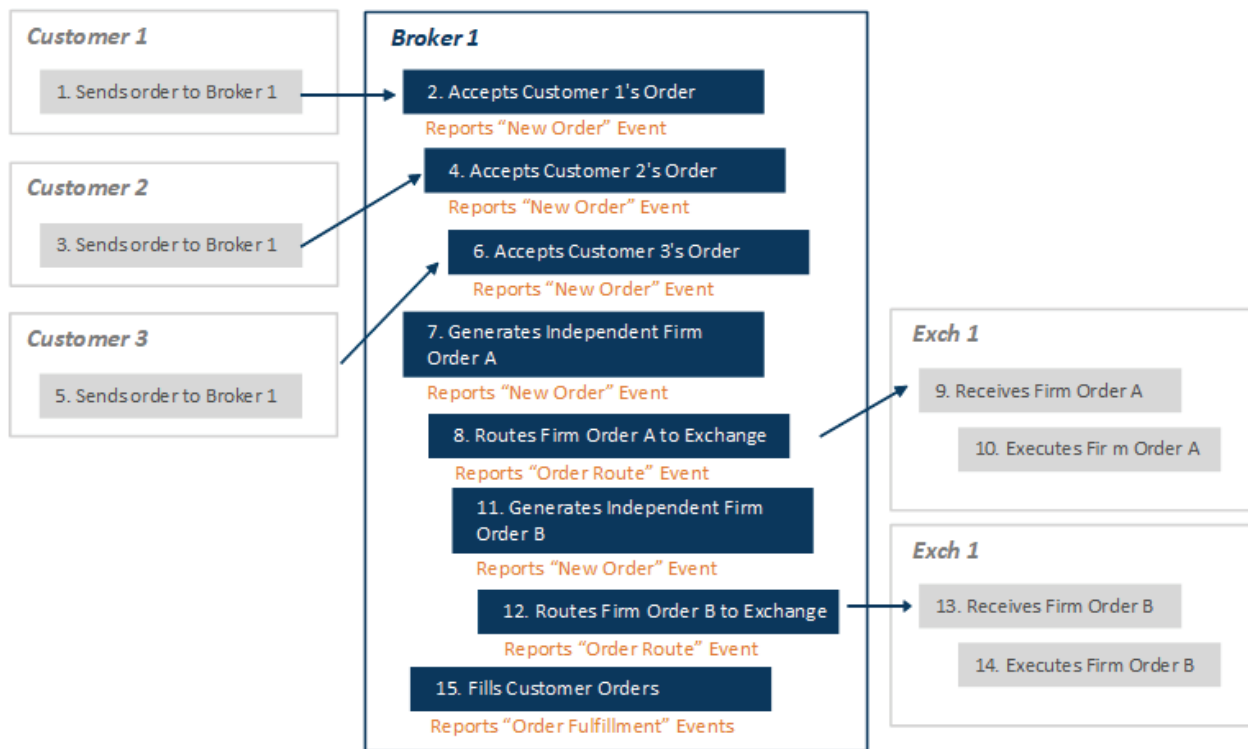
Industry Member Broker 1 is required to report:

- 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. When a *fulfillmentLinkType* value of "YE" is populated, the *firmDetails* 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 *firmDetails* 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 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	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 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	Although Broker 1 is manually entering the order into its EMS, proprietary orders that are simultaneously entered into an OMS/EMS upon origination are always considered electronic. 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.

| #	Step	Reported Event	Comments
		custDspIntrFlag: false firmDesignatedID: PROP123 accountHolderType: V affiliateFlag: false aggregatedOrders: negotiatedTradeFlag: false representativeInd: YE	
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: 123: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***	
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	Although Broker 1 is manually entering the order into its EMS, proprietary orders that are simultaneously entered into an OMS/EMS upon origination are always considered electronic. 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.

#	Step	Reported Event	Comments
		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	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: 123:BRKA destination: EXCH1 destinationType: E routedOrderID: S12O560 session: 1112 side: B price: 10.01 quantity: 900 orderType: LMT 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	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

#	Step	Reported Event	Comments
		fulfillmentID: FO55501 symbol: XYZ eventTimestamp: 20170801T143040.123456 manualFlag: true electronicTimestamp: 20170801T143040.123456 quantity: 500 price: 10.01 capacity: R fulfillmentLinkType: YE clientDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B firmDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P *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 price: 10.01 capacity: R fulfillmentLinkType: YE clientDetails: orderKeyDate: 20170801T000000 orderID: O12350 side: B firmDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	*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. *firmDetails* are required. Broker 1 must populate the *firmDetails* with the *accountHolderType* and the FDID of the account from which the order was filled.

#	Step	Reported Event	Comments
		*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: R fulfillmentLinkType: YE clientDetails: orderKeyDate: 20170801T000000 orderID: O12355 side: B firmDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	

2.3.11. Fill of a Customer Order at a Guaranteed Volume Weighted Average Price

This scenario illustrates the CAT reporting requirements when an Industry Member fills a single customer order at a guaranteed volume weighted average price. In this scenario, the Industry Member receives a customer order to buy 10,000 shares of XYZ and the firm agrees to execute the order at an agreed upon VWAP. The Industry Member originates multiple proprietary orders in an effort to work the customer order. The Industry Member is unable to achieve the VWAP through its execution of the principal orders. Since the Industry Member was unable to obtain the price that was guaranteed to the customer, the Industry Member sells the shares to the customer from a proprietary account at the guaranteed VWAP price.
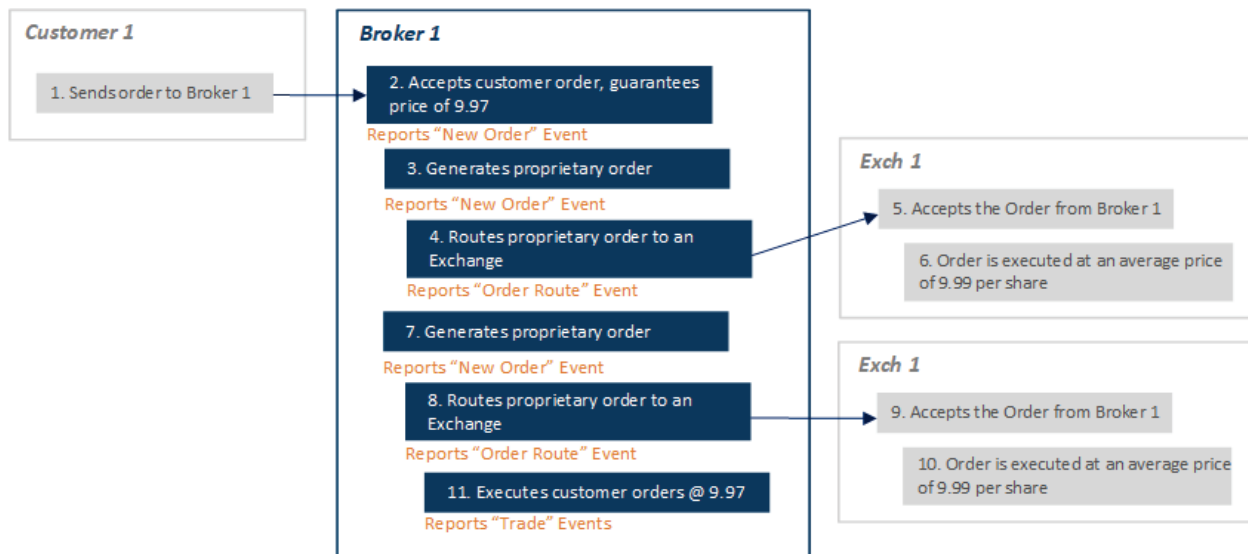
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The generation of each representative order (New Order events)
- The route of each representative order to an exchange (Order Route events)
- The execution of the customer order at the guaranteed VWAP price which was 9.97 (Order Trade event)

In this scenario, linkage between the customer order and the representative orders is not possible, as the customer order was not filled from the proprietary orders since the guaranteed price was not achieved on the exchange.

In this scenario, since the customer order is ultimately executed from a proprietary account at the guaranteed price, Broker 1 has an obligation to submit a media trade report for public dissemination purposes. Therefore, Broker 1 would be required to report a Trade event representing the outcome of the customer order as opposed to an Order Fulfillment event.

In a scenario where the Industry Member was able to achieve the VWAP through its proprietary orders and fills the customer order in a Riskless Principal capacity, the Industry Member would be required to report Order Fulfillment events with a *fulfillmentLinkType* value of 'Y'. *firmDetails* would be required, and would be populated with the *orderID* of the proprietary order from which the fill came. If the Industry Member's workflow involves a disconnected OMS/EMS or a position fill model, the Industry Member would be required to report an Order Fulfillment event with a *fulfillmentLinkType* value of 'YE', and *firmDetails* would be required. Broker 1 must populate the *firmDetails* with the *accountHolderType* and the FDID of the account from which the order was filled.

#	Step	Reported Event	Comments
1	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.634456 manualFlag: false deptType: T side: B price: quantity: 10,000 orderType: MKT timeInForce: DAY tradingSession: REG handlingInstructions: GVWAP custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	The *handlingInstructions* field must be populated with a value of 'GVWAP' to indicate that the order was received with instructions to execute at a guaranteed volume-weighted average price.
2	Broker 1 originates a proprietary order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180501T153036.234456 manualFlag: false deptType: T side: B price: 9.99 quantity: 5,000 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: custDspIntrFlag: false firmDesignatedID: PRO001 accountHolderType: P aggregatedOrders: affiliateFlag: false negotiatedTradeFlag: false representativeInd: YP	The *representativeInd* field must be populated with a value of 'YP' to indicate that this was a representative order, and that the original customer was guaranteed a specific price for execution. The *aggregatedOrders* field must not be populated, as linkage between the customer order and the representative order is not possible.

#	Step	Reported Event	Comments
3	Broker 1 routes the proprietary order to Exch 1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180501T153036.234556 manualFlag: false senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: B price: 9.99 quantity: 5,000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	
4	Exch 1 accepts the proprietary order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
5	Order is executed on the exchange at an average price of @9.99 per share	*Exch 1 reports Participant **Trade events***	
6	Broker 1 originates a proprietary order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153038.234456 manualFlag: false deptType: T side: B price: 9.99 quantity: 5,000 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: custDspIntrFlag: false	The *representativeInd* field must be populated with a value of 'YP' to indicate that this was a representative order, and that the original customer was guaranteed a specific price for execution. The *aggregatedOrders* field must not be populated, as linkage between the customer order and the representative order is not possible.

#	Step	Reported Event	Comments
		firmDesignatedID: PRO001 accountHolderType: P aggregatedOrders: affiliateFlag: false negotiatedTradeFlag: false representativeInd: YP	
7	Broker 1 routes the proprietary order to Exch 1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153038.234556 manualFlag: false senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: AO456 session: s5 side: B price: 9.99 quantity: 5,000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	
8	Exch 1 accepts the proprietary order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
9	Order is executed on the exchange at an average price of @9.99 per share	*Exch 1 reports Participant **Trade events***	
10	Broker 1 executes the customer order from a proprietary account at the VWAP	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180501T153039.234556 manualFlag: false quantity: 10,000	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. If Broker 1 filled the customer order in a Riskless Principal capacity, Broker 1 would report MEOFs instead of an MEOT with a *fulfillmentLinkType* of 'Y'. *firmDetails* would be required to be populated with the *orderID* of the proprietary order from which the fill

#	Step	Reported Event	Comments
		price: 9.97 capacity: P tapeTradeID: TRF123 marketCenterID: DN negotiatedTradeSide: NA buyDetails: orderKeyDate: 20180501T000000 orderID: O12345 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	came. If Broker 1 filled the customer order from an existing position or using a disconnected OMS/EMS, the *fulfillmentLinkType* field would be populated with a value of 'YE' and *firmDetails* would be required. Broker 1 must populate the *firmDetails* with the *accountHolderType* and the FDID of the account from which the order was filled.

2.3.12. Fill of a Single Customer Order from Multiple Representative Orders

This scenario illustrates the CAT reporting requirements when an Industry Member fills a customer order on from multiple representative orders. In this example, Industry Member Broker 1 generates three representative orders to facilitate the execution of a customer order, and routes each representative order to an exchange for execution. The representative orders are executed throughout the day, and the Industry Member fills the customer at an average price of the three representative orders.
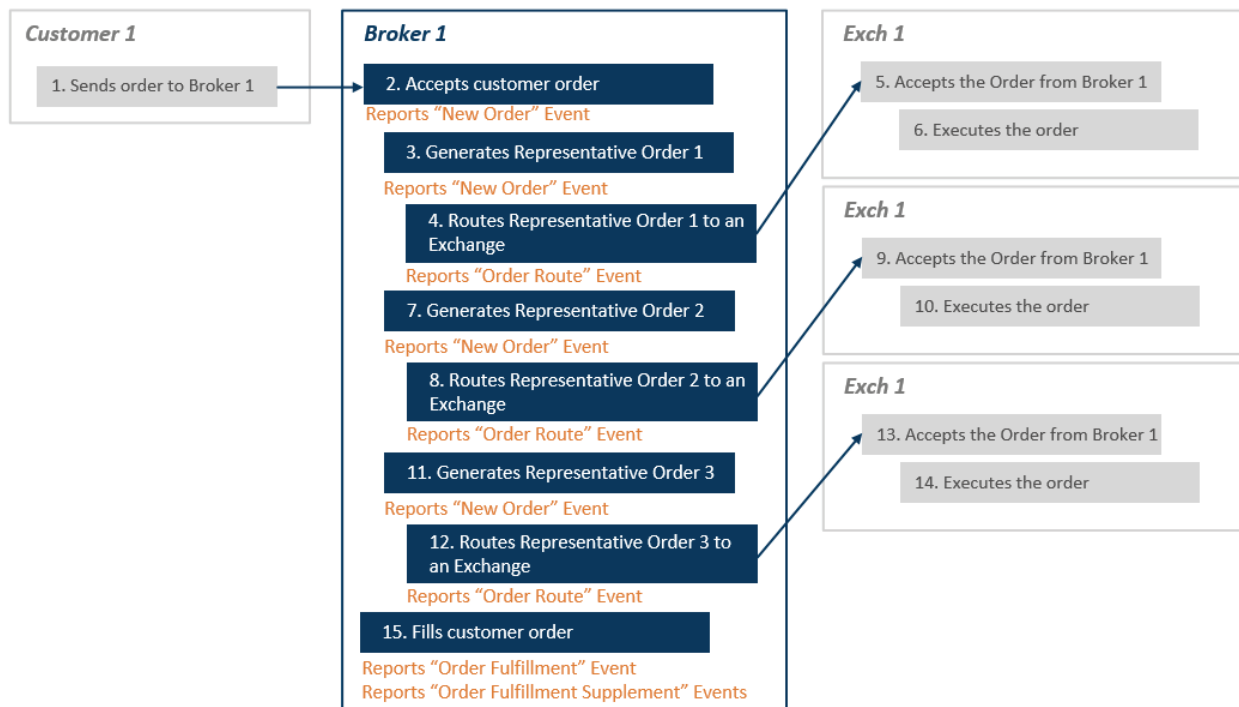
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The generation of each representative order (New Order events)
- The route of each representative order to the exchange (Order Route events)
- The fill of the customer order from each representative order (Order Fulfillment event with three Order Fulfillment Supplement events)

Explicit linkage between the customer order and each representative order is required in the *aggregatedOrders* field on the representative MENO. On the Order Fulfillment event, since the customer order was filled from more than one representative order, the *fulfillmentLinkType* must be populated with a value of 'YS'. The *firmDetails* in the Order Fulfillment event must be blank, but the *firmDetails* for each representative order that was used to fill the customer order must be provided in a separate Order Fulfillment Supplement event.

#	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 Rep Order 1	Broker 1 reports a **New Order event** type: MENO orderKeyDate: 20170801T000000 orderID: RO3456 symbol: XYZ	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.

#	Step	Reported Event	Comments
		eventTimestamp: 20170801T143131.623456 manualFlag: false deptType: T side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C0005 accountHolderType: P affiliateFlag: false aggregatedOrders: O12345@20170801T000000@5000@ negotiatedTradeFlag: false representativeInd: Y	The *aggregatedOrders* field must be populated.
4	Broker 1 routes Rep Order 1 to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: RO3456 symbol: XYZ eventTimestamp: 20170801T143131.523456 manualFlag: false senderIMID: 123:BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12350 session: 1109 side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
5	Exchange 1 accepts Rep Order 1	*Exchange 1 reports a Participant **Order Accepted event***	
6	Exchange 1 matches and crosses the order	*Exchange 1 reports a Participant **Trade events***	

| #	Step	Reported Event	Comments
7	Broker 1 generates Rep Order 2	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: RO5678 symbol: XYZ eventTimestamp: 20170801T143830.123456 manualFlag: false deptType: T side: B price: 10.00 quantity: 3000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C0005 accountHolderType: P affiliateFlag: false aggregatedOrders: O12345@20170801T000000@3000@ 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. The *aggregatedOrders* field must be populated.
8	Broker 1 routes Rep Order 2 to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: RO5678 symbol: XYZ eventTimestamp: 20170801T143830.623456 manualFlag: false senderIMID: 123:BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12355 session: 1109 side: B price: 10.00 quantity: 3000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	

#	Step	Reported Event	Comments
9	Exchange 1 accepts Rep Order 2	*Exchange 1 reports a Participant **Order Accepted event***	
10	Exchange 1 matches and crosses the order	*Exchange 1 reports a Participant **Trade events***	
11	Broker 1 generates Rep Order 3	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: RO6789 symbol: XYZ eventTimestamp: 20170801T144340.123456 manualFlag: false deptType: T side: B price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: C0005 accountHolderType: P affiliateFlag: false aggregatedOrders: O12345@20170801T000000@2000@ 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. The *aggregatedOrders* field must be populated.
12	Broker 1 routes Rep Order 3 to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: RO6789 symbol: XYZ eventTimestamp: 20170801T144340.623456 manualFlag: false senderIMID: 123:BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12360 session: 1109 side: B price: 10.00 quantity: 2000	

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
13	Exchange 1 accepts Rep Order 2	*Exchange 1 reports a Participant **Order Accepted event***	
14	Exchange 1 matches and crosses the order	*Exchange 1 reports a Participant **Trade events***	
15	Broker 1 fills the customer order at an average price of the three representative orders	*Broker 1 reports an **Order Fulfillment event*** type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20170801T145030.623456 manualFlag: false fulfillmentLinkType: YS quantity: 10000 price: 10.00 capacity: R clientDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B firmDetails: *Broker 1 reports an **Order Fulfillment Supplement event (1/3)*** type: MEOFS fillKeyDate: 20170801T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20170801T145030.623456 firmDetails: orderKeyDate: 20170801T000000 orderID: RO3456 side: SL quantity: 5000 *Broker 1 reports an **Order Fulfillment Supplement event (2/3)***	The *fulfillmentLinkType* field must be populated with a value of 'YS' to indicate that the *firmDetails* will be provided in supplement events. One MEOFS event must be reported for each representative order that was used to fill the customer order.

#	Step	Reported Event	Comments
		type: MEOFS fillKeyDate: 20170801T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20170801T145030.623456 firmDetails: orderKeyDate: 20170801T000000 orderID: RO5678 side: SL quantity: 3000 *Broker 1 reports an **Order Fulfillment Supplement event (3/3)*** type: MEOFS fillKeyDate: 20170801T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20170801T145030.623456 firmDetails: orderKeyDate: 20170801T000000 orderID: RO6789 side: SL quantity: 2000	

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 affiliateFlag: false infoBarrierID: AB12 negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 internally routes the order from the Sales Desk to the	*Broker 1 reports an* **Order Internal Route Accepted event**	In this example, the Trading Desk, assigns a new Order Key upon receipt of the internal route with

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

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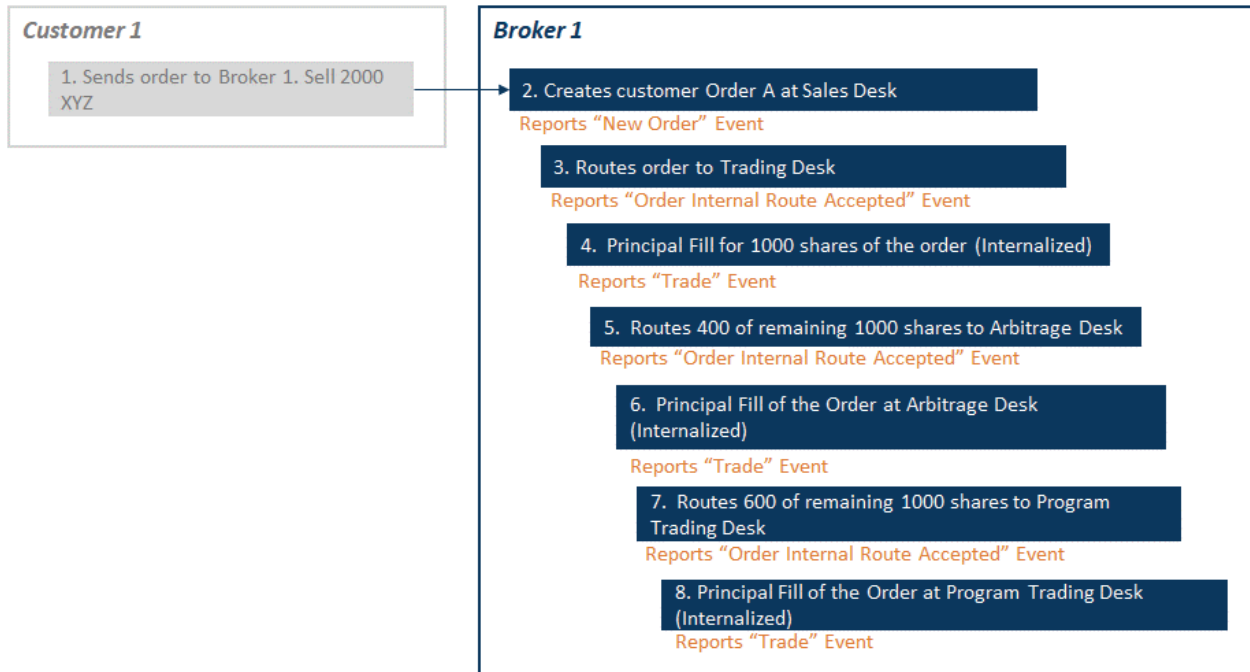
Industry Member Broker 1 is required to report the following for each desk:

- 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
  - The receipt of the internal route from the Sales Desk (Order Internal Route Accepted event)
  - The principal execution (Trade event)
- At the Program Trading Desk
  - The receipt of the internal route from the Sales Desk (Order Internal Route Accepted event)
  - 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 side: SL price: 10.02 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	In this example, The Trading Desk assigns a new Order Key upon receipt of the internal route 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
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 receivingDeskType: AR side: SL price: 10.02 quantity: 400 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	In this example, the arbitrage desk assigns a new Order Key upon receipt of the internal route 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
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 deptType: T receivingDeskType: PT side: SL price: 10.02 quantity: 600 orderType: LMT timeInForce: DAY=20170801	In this example, the Program Trading Desk assigns a new Order Key upon receipt of the internal route 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
		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 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	In this example, the Trading Desk assigns a new Order Key upon receipt of the internal route with *orderID* T12333. 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

#	Step	Reported Event	Comments
		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	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: side: SL firmDesignatedID: PROP123 accountHolderType: P	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.
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	

#	Step	Reported Event	Comments
		eventTimestamp: 20170801T143033.123456 manualFlag: false senderIMID: 123:BRKA destination: 456: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: 456:FIRMB senderIMID: 123:BRKA senderType: F routedOrderID: FA12333 affiliateFlag: false deptType: T side: B price: 10.01 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA custDspIntrFlag: false	
7	Broker 2 matches and executes Broker 1's buy order B12345 against sell order C45678	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20170801T000000 tradeID: TXYZ001 symbol: XYZ	

#	Step	Reported Event	Comments
		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.
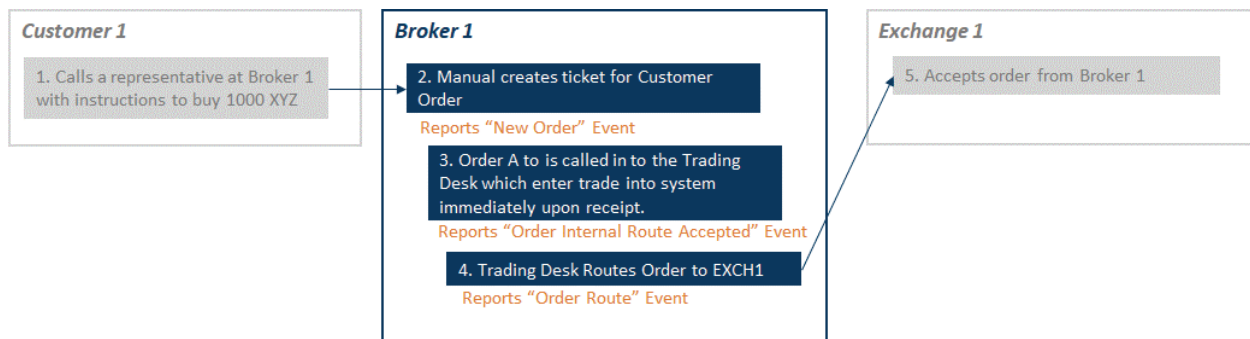
Industry Member Broker 1 is required to report:

- 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 custDspIntrFlag: false firmDesignatedID: FDID00234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	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.
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	In this example, 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

#	Step	Reported Event	Comments
		eventTimestamp: 20180417T153016.112345 manualFlag: true electronicTimestamp: 20180417T153016.112345 deptType: T receivingDeskType: T side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG	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: 123:BRKR1 destination: EXCH1 destinationType: E routedOrderID: RTO24680 session: s18 side: B price: 10.00 quantity: 1000 orderType: LMT 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 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	*Broker 1 reports an **Order Route event***	

#	Step	Reported Event	Comments
	to the exchange	type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.334456 manualFlag: false senderIMID: 123: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 modifies the parent order or cancels the internal route as described in the two options below.

Option 1:

In Option 1, the Sales Desk modifies the internal route that was sent to the Trading Desk.

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)
  - The receipt of the customer modification request (Order Modification Request event)
  - The confirmation of the customer Modification (Order Modified 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 receipt of the modification request from the Sales Desk (Order Internal Route Modification Request event)
  - The modification of the route to the exchange (Route Modified event)
  - The confirmation of the internal route modification at the Trading Desk (Order Internal Route Modified event)

In its Order Modified event, the Sales Desk is required to capture the time the order was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). Depending on the firm's order flow, this may be the same time the request is received, or this may be the time acknowledgement is received from the Trading Desk. In its Order Internal Route Modified event, the Trading Desk is

required to capture the time the internal route was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). Depending on the firm's order flow, this may be the same time the request is received, or this may be the time acknowledgement is received from the exchange. In this example, the *eventTimestamp* on the modification events represents the time that acknowledgement was received.

The Sales Desk is also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Modified event, or in a separate Order Modification Request event. The Trading Desk is also required to capture the time that the request was received from the Sales Desk in the *requestTimestamp* field in the Order Internal Route Modified event, or in a separate Order Internal Route Modification Request event. In this example, the request time is captured using separate request events at each desk.

Option 2:

In Option 2, the Sales Desk sends a new internal route to the Trading Desk.
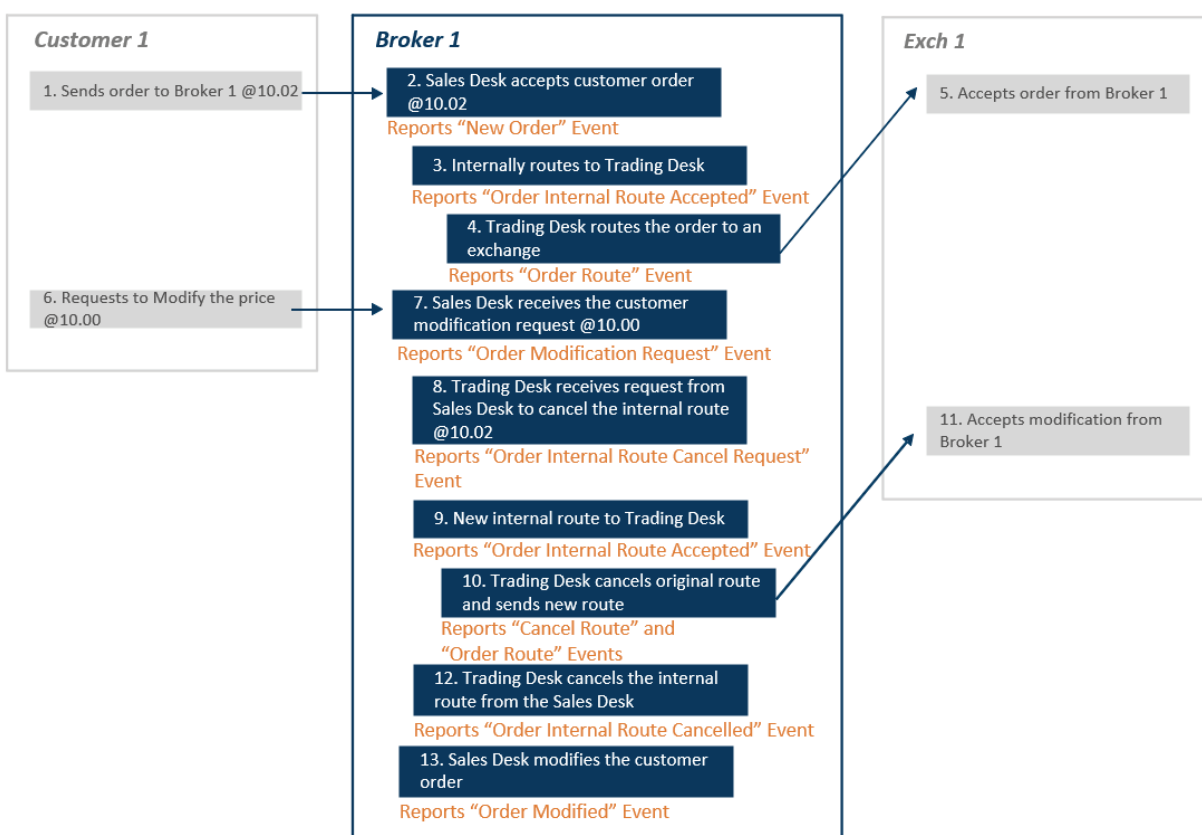
Industry Member Broker 1 is required to report the following for each desk:

- At the Sales Desk

- ◆ The receipt of the customer order (New Order event)
- ◆ The receipt of the customer modification request (Order Modification Request event)
- ◆ The confirmation of the customer modification (Order Modified event)
- At the Trading Desk
  - ◆ The receipt of the first internal route from the Sales Desk (Order Internal Route Accepted event)
  - ◆ The route of the order to the exchange (Order Route event)
  - ◆ The request to cancel the first internal route from the Sales Desk (Order Internal Route Cancel Request event)
  - ◆ The cancellation of the original route to the exchange (Route Cancelled event)
  - ◆ The new route to the exchange (Order Route event)
  - ◆ The receipt of the second internal route from the Sales Desk (Order Internal Route Accepted event)
  - ◆ The confirmation of the cancellation of the first internal route from the Sales Desk (Order Internal Route Cancelled event)

In its Order Modified event, the Sales Desk is required to capture the time the order was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). Depending on the firm's order flow, this may be the same time the request is received, or this may be the time acknowledgement is received from the Trading Desk. In its Order Internal Route Cancelled event, the Trading Desk is required to capture the time the internal route was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). Depending on the firm's order flow, this may be the same time the request is received, or this may be the time acknowledgement is received from the exchange. In this example, the *eventTimestamp* on the modification/cancellation events represents the time that acknowledgement was received.

The Sales Desk is also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Modified event, or in a separate Order Modification Request event. The Trading Desk is also required to capture the time that the request was received from the Sales Desk in the *requestTimestamp* field in the Order Internal Route Cancelled event, or in a separate Order Internal Route Cancel Request event. In this example, the request time is captured using separate request events at each desk.

#	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	In this example, the Trading Desk assigns a new Order Key upon receipt of the internal route 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 eventTimestamp: 20170801T143032.123456	

#	Step	Reported Event		Comments
		manualFlag: false senderIMID: 123: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 requests to modify the price of the order	*NA*		
7	Sales Desk receives customer request to modify the price of the order	*Broker 1 reports an **Order Modification Request event*** type: MEOMR orderKeyDate: 20170801T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20170801T143034.323456 manualFlag: false receiverIMID: senderIMID: senderType: side: SL price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false		Since an Order Modification Request event was reported, the *requestTimestamp* in the related Order Modified event must be blank. The Order Modification Request event must maintain the same *orderID* O11111 as the New Order event for which the modification is being requested.
8	Trading Desk receives the request to modify the order from Sales Desk	***Option 1*** *Broker 1 reports an **Order Internal Route Modification Request** event* type: MEIMR	***Option 2*** *Broker 1 reports an **Order Internal Route Cancel Request** event* type: MEICR	The Order Internal Route Modification and Cancellation Request event must maintain the same *orderID* O9996 as the Order Internal Route Accepted event for which the

#	Step	Reported Event		Comments
		orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ eventTimestamp: 20170801T143035.623456 manualFlag: false deptType: T receivingDeskType: T side: SL price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ eventTimestamp: 20170801T143035.623456 manualFlag: false cancelQty: *Broker 1 reports an Order Internal Route Accepted event* type: MEIR orderKeyDate: 20170801T000000 orderID: O9998 symbol: XYZ parentOrderKeyDate: 20170801T000000 parentOrderID: O11111 eventTimestamp: 20170801T143035.623456 manualFlag: false deptType: T receivingDeskType: T side: SL price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	modification/ cancellation is being requested. In Option 2, the *parentOrderID* in the new Order Internal Route Accepted event may reference either the orderID O11111 of the related New Order event or OM11111 of the related Order Modified event.
9	Trading Desk routes the order/modification to the exchange	***Option 1*** *Broker 1 reports a Route Modified event* type: MEMR orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ eventTimestamp: 20170801T143035.823456 manualFlag: false senderIMID: 123:BRK1	***Option 2*** *Broker 1 reports a Route Cancelled event (1/2)* type: MECR orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ eventTimestamp: 20170801T143035.823456 manualFlag: false senderIMID: 123:BRK1	In Option 1, Broker 1 modifies the route that was previously sent to the exchange. In Option 2, Broker 1 reports a new route to the exchange and cancels the original route. In this scenario, both options are interchangeable based on the firm's workflow.

#	Step	Reported Event		Comments
		destination: Exch1 destinationType: E routedOrderID: S9O12360 priorRoutedOrderID: S9O12350 session: 1109 side: SL price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	destination: Exch1 destinationType: E routedOrderID: S9O12350 session: 1109 *Broker 1 reports an **Order Route event (2/2)*** type: MEOR orderKeyDate: 20170801T000000 orderID: O9998 symbol: XYZ eventTimestamp: 20170801T143035.823456 manualFlag: false senderIMID: 123:BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12360 session: 1109 side: SL price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
10	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.
11	Trading Desk confirms the modification	***Option 1*** *Broker 1 reports an **Order Internal Route Modified event***	***Option 2*** *Broker 1 reports an **Order Internal Route Cancelled event***	In Option 1, the Trading Desk is required to report an Order Internal Route Modified event reflecting the time the

#	Step	Reported Event		Comments
		type: MEIM orderKeyDate: 20170801T000000 orderID: O9998 symbol: XYZ priorOrderKeyDate: 20170801T000000 priorOrderID: O9996 eventTimestamp: 20170801T143035.923456 manualFlag: false deptType: T receivingDeskType: T initiator: F side: SL price: 10.00 quantity: 2000 leavesQty: 0 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG requestTimestamp:	type: MEIC orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ eventTimestamp: 20170801T143035.923456 manualFlag: false cancelQty: 2000 leavesQty: 0 initiator: F	modification was confirmed. In this example, this is the time that acknowledgement was received from the exchange. In this example, since the orderID is being changed on the MEIM event, the *priorOrderID* must reference the *orderID* of the Internal Route event being modified. Since an Order Internal Route Modification Request event was reported, the requestTimestamp in the Order Modified event must be blank. If the *orderID is* not changed, the *priorOrderID* on the Order Internal Route Modified event must be blank. In Option 2, the Trading Desk is required to report an Order Internal Route Cancelled event reflecting the time the original internal route was cancelled. In this example, this is the time that acknowledgement was received from the exchange. In both options, the initiator flag is populated with a value of 'F', as the trading desk modified the order based on an instruction from the sales desk. Refer to CAT FAQ B63 for additional information.
12	Sales Desk confirms the modification of the customer order	***Option 1*** *Broker 1 reports an **Order Modified event***	***Option 2*** *Broker 1 reports an **Order Modified event***	In its Order Modified event, the Sales Desk is required to report the time the order was modified. In this

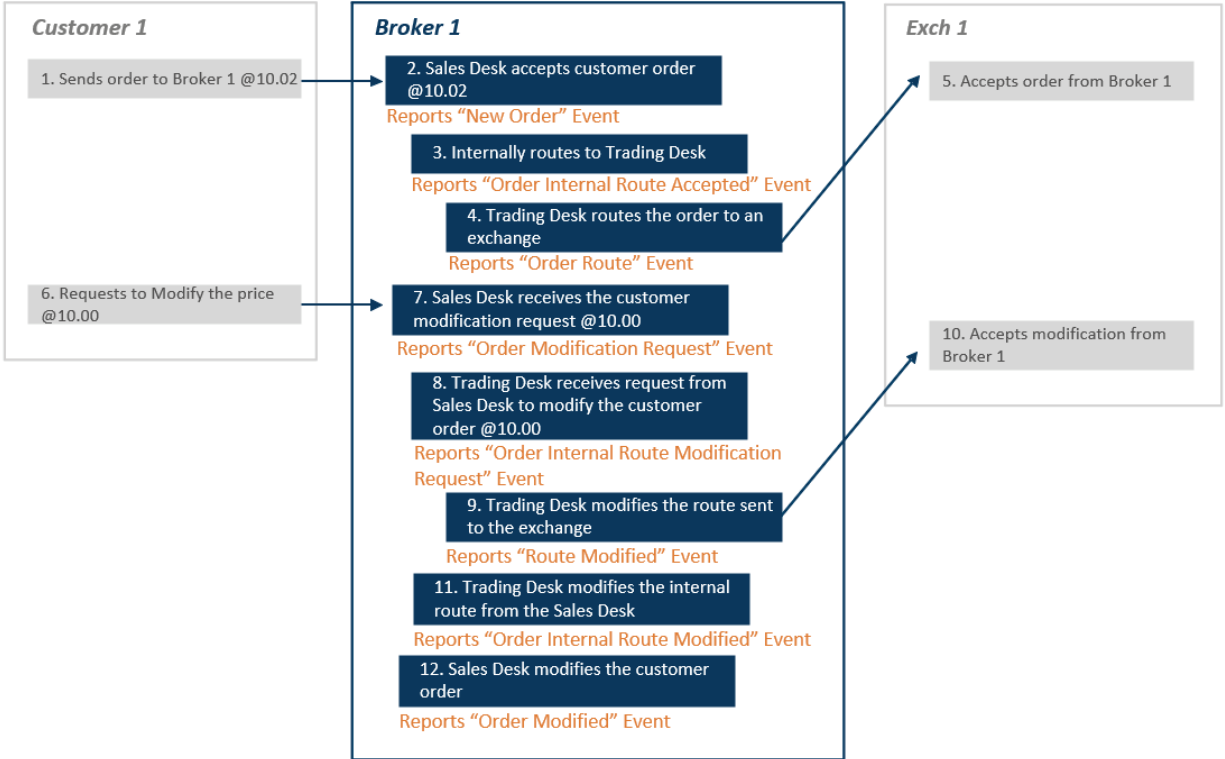| #	Step	Reported Event		Comments
		type: MEOM orderKeyDate: 20170801T000000 orderID: OM11111 symbol: XYZ priorOrderKeyDate: 20170801T000000 priorOrderID: O11111 eventTimestamp: 20170801T143035.923456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: SL price: 10.00 quantity: 2000 leavesQty: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false requestTimestamp:	type: MEOM orderKeyDate: 20170801T000000 orderID: OM11111 symbol: XYZ priorOrderKeyDate: 20170801T000000 priorOrderID: O11111 eventTimestamp: 20170801T143035.923456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: SL price: 10.00 quantity: 2000 leavesQty: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false	example, this is the event time that acknowledgement was received from the Trading Desk. In this example, since the orderID is being changed on the MEOM event, the *priorOrderID* must reference the *orderID* of the New Order event being modified. 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. Option 1: Since an Order Modification Request event was reported, the *requestTimestamp* in the Order Modified event must be blank.

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 internal route or cancels the internal route as described in the two options below.

Option 1:

In Option 1, the Sales Desk modifies the Internal Route that was sent to the trading desk.
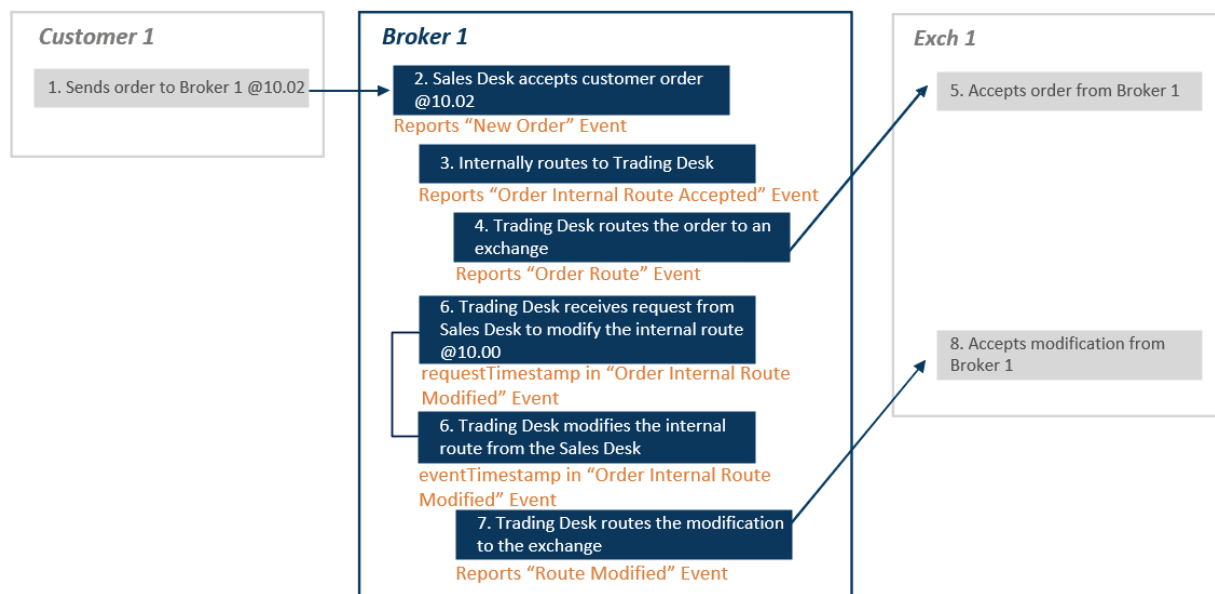
Industry Member Broker 1 is required to report the following for each desk:

- 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 receipt of the modification request from the Sales Desk (*requestTimestamp* in Order Internal Route Modified event)
  - ◆ The modification of the internal route from the Sales Desk (*eventTimestamp* in Order Internal Route Modified event)
  - ◆ The route of the modification to the exchange (Route Modified event)

In its Order Internal Route Modified event, the Trading Desk is required to capture the time the internal route was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). Depending on the firm's order flow, this may be the same time the request is received, or this may be the time acknowledgement is received from the exchange. In this example, the *eventTimestamp* in the Order Internal Route Modified event is the time that the request was received.

The Trading Desk is also required to capture the time that the request was received from the Sales Desk in the *requestTimestamp* field in the Order Internal Route Modified event, or in a separate Order Internal Route Modification Request event. In this example, the request time is captured using the *requestTimestamp* field in the Order Internal Route Modified event.

Option 2:

In Option 2, the Sales Desk cancels the original internal route and sends a new Internal Route to the Trading Desk.
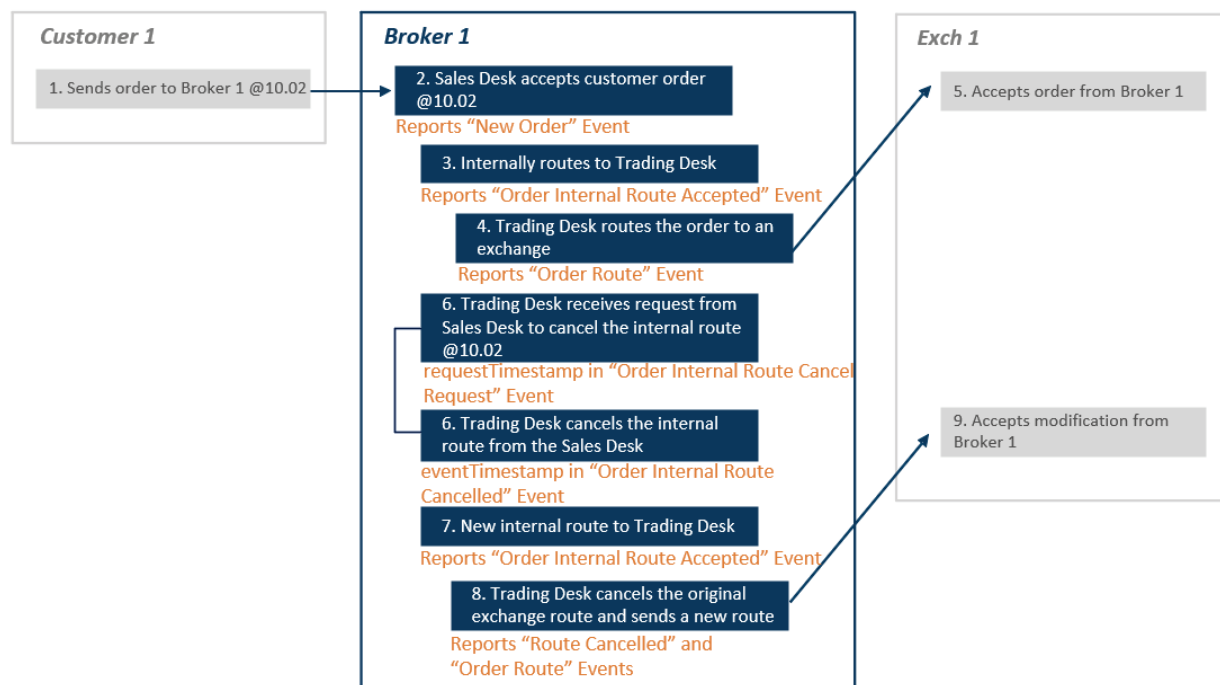
Industry Member Broker 1 is required to report the following for each desk:

- 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 the cancellation request from the Sales Desk for the original internal route (*requestTimestamp* in Order Internal Route Cancelled event)
  - ◆ The cancellation of the initial internal route from the Sales Desk (*eventTimestamp* Order Internal Route Cancelled 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)

In its Order Internal Route Cancelled event, the Trading Desk is required to capture the time the internal route was cancelled (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS).

Depending on the firm's order flow, this may be the same time the request is received, or this may be the time acknowledgement is received from the exchange. In this example, the *eventTimestamp* in the Order Internal Route Cancelled event is the time that the request was received.

The Trading Desk is also required to capture the time that the request was received from the Sales Desk in the *requestTimestamp* field in the Order Internal Route Cancelled event, or in a separate Order Internal Route Cancel Request event. In this example, the request time is captured using the *requestTimestamp* field in the Order Internal Route Cancelled 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: 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	In this example, the Trading Desk assigns a new Order Key upon receipt of the internal route 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

#	Step	Reported Event		Comments
		receivingDeskType: T side: SL price: 10.02 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG		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: 123:BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12350 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	Trading Desk receives the request from the sales desk and modifies/ cancels the Internal route	***Option 1*** *Broker 1 reports an **Order Internal Route Modified*** type: MEIM orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ priorOrderKeyDate: priorOrderID: eventTimestamp: 20170801T143035.123456 manualFlag: false deptType: T	***Option 2*** *Broker 1 reports an **Order Internal Route Cancelled event*** type: MEIC orderKeyDate: 20170801T000000 orderID: O9998 symbol: XYZ eventTimestamp: 20170801T143035.123456 manualFlag: false cancelQty: 1000 leavesQty: 0	In Option 1, since the Trading desk received a request to modify the internal route, the Trading Desk will be required to report an Order Internal Route Modified event. In Option 2, since the Trading Desk received a request to cancel the original internal route and a new internal route at a different price, the Trading Desk will be required to report an Order Internal Route

#	Step	Reported Event		Comments
		receivingDeskType: T initiator: F side: SL price: 10.00 quantity: 1000 leavesQty: 0 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG requestTimestamp: 20170801T143035.123456	initiator: F requestTimestamp: 20170801T143035.123456 *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	Cancelled event and a new Order Internal Route Accepted event. In this example, the event time is the same time that the request was received. In both options, the initiator flag is populated with a value of 'F', as the trading desk modified the order based on an instruction from the sales desk. Refer to CAT FAQ B63 for additional information. Since the *requestTimestamp* is populated, Broker 1 must not report a separate an Order Internal Route Order Internal Route Modification Request event.
7	Trading Desk routes the order/modification to the exchange	***Option 1*** *Broker 1 reports a **Route Modified event*** type: MEMR orderKeyDate: 20170801T000000 orderID: O9998 symbol: XYZ eventTimestamp: 20170801T143035.623456 manualFlag: false senderIMID: 123:BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12360 priorRoutedOrderID: S9O12350 session: 1109	***Option 2*** *Broker 1 reports a **Route Cancelled event (1/2)*** type: MECR orderKeyDate: 20170801T000000 orderID: O9996 symbol: XYZ eventTimestamp: 20170801T143035.623456 manualFlag: false senderIMID: 123:BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12350 session: 1109	In Option 1, Broker 1 modifies the route sent to the exchange. In Option 2, Broker 1 cancels the original route sent to the exchange and sends a new route. In this scenario, both options are interchangeable based on the firm's workflow.

#	Step	Reported Event		Comments
		side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O9998 symbol: XYZ eventTimestamp: 20170801T143035.623456 manualFlag: false senderIMID: 123: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	
8	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.

2.4.8. Order Internally Routed to Multiple Desks and Subsequently Cancelled by a Customer

This scenario illustrates the CAT reporting requirements when an Industry Member internally routes a customer order to multiple desks, and the order is subsequently cancelled by the customer.

In this scenario, the Sales Desk receives an order from a customer and routes the order to Trading Desk 1, who further routes the order to Trading Desk 2, where the order is further routed to an exchange for execution. The customer subsequently sends an instruction to cancel the order. Since the Sales Desk knows that Trading Desk 2 is holding the order, the cancellation is communicated directly to Trading Desk 2 by the Sales Desk, and is not communicated to Trading Desk 1. Trading Desk 1 does not have an obligation to report an Order Internal Route Cancelled event since it did not receive the cancellation instruction.
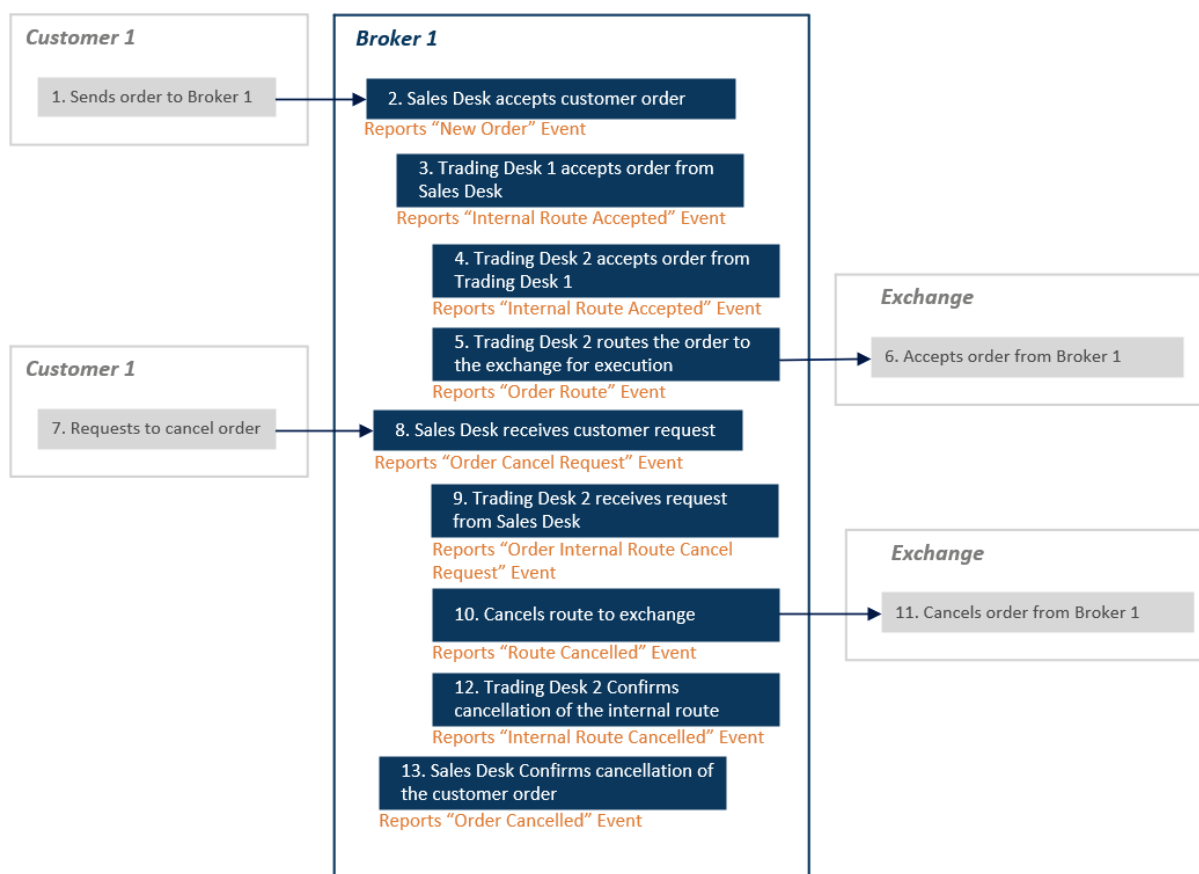
Industry Member Broker 1 is required to report the following for each desk:

- At the Sales Desk
  - The receipt of the customer order (New Order event)
  - The receipt of the customer request (Order Cancel Request event)
  - The confirmation of the customer cancellation (Order Cancelled event)
- At Trading Desk 1
  - The receipt of the internal route from the Sales Desk (Order Internal Route Accepted event)
- At Trading Desk 2
  - The receipt of the internal route from Trading Desk 1 (Order Internal Route Accepted event)

- The receipt of the request from the Sales Desk (Order Internal Route Cancel Request event)
- The confirmation of the cancellation of the internal route from the Sales Desk (Order Internal Route Cancelled event)

In its Order Cancelled event, the Sales Desk is required to capture the time the order was cancelled (e.g., the time that the order was confirmed to be cancelled in the firm's OMS/EMS). Depending on the firm's order flow, this may be the same time the request is received, or this may be the time acknowledgement is received from the Trading Desk. In its Order Internal Route Cancelled event, the Trading Desk is required to capture the time the internal route was cancelled (e.g., the time that the order was confirmed to be cancelled in the firm's OMS/EMS). Depending on the firm's order flow, this may be the same time the request is received, or this may be the time acknowledgement is received from the exchange. In this example, the *eventTimestamp* on the cancellation events represents the time that acknowledgement was received.

The Sales Desk is also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Modified event, or in a separate Order Modification Request event. Trading Desk 2 is also required to capture the time that the request was received from the Sales Desk in the *requestTimestamp* field in the Order Internal Route Modified event, or in a separate Order Internal Route Modification Request event. In this example, the request time is captured using separate request events at each desk.

#	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	If the Sales Desk creates a child order, the Sales Desk would also report a Child Order event.

#	Step	Reported Event	Comments
		affiliateFlag: false infoBarrierID: DSK5555 negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 internally routes the order from the Sales Desk to Trading Desk 1	*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 infoBarrierID: DSK7777 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	Trading Desk 1 internally routes the order to Trading Desk 2	*Broker 1 reports an **Order Internal Route Accepted event*** type: MEIR orderKeyDate: 20170801T000000 orderID: O9999 symbol: XYZ parentOrderKeyDate: 20170801T000000 parentOrderID: O9996 eventTimestamp: 20170801T143031.523456 manualFlag: false deptType: T receivingDeskType: T infoBarrierID: DSK9999 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* O9999. The Parent Order Key with *orderID* O9996 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
5	Trading Desk 2 routes the order to an exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O9999 symbol: XYZ eventTimestamp: 20170801T143032.123456 manualFlag: false senderIMID: 123: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	
6	Exchange 1 accepts the order	*Exchange 1 reports a Participant **Order Accepted event***	
7	Customer requests to cancel the order	*NA*	
8	Sales Desk receives customer request to cancel the order	*Broker 1 reports an **Order Cancel Request event*** type: MEOCR orderKeyDate: 20170801T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20170801T143035.123456 manualFlag: false cancelQty: 2000	The *orderID* on the Order Cancel Request event must reference the related New Order event for which the customer is requesting the cancellation.
9	Trading Desk 2 receives the request to cancel the order from Sales Desk	*Broker 1 reports an **Order Internal Route Cancel Request event*** type: MEICR orderKeyDate: 20170801T000000 orderID: O9999 symbol: XYZ eventTimestamp: 20170801T143035.133456 manualFlag: false	The *orderID* on the Order Internal Route Cancel Request event must reference the related Order Internal Route Accepted event for which the Sales Desk is requesting the cancellation.

#	Step	Reported Event	Comments
		cancelQty: 2000	
10	Trading Desk 2 cancels the exchange route	*Broker 1 reports a **Route Cancelled event*** type: MECR orderKeyDate: 20170801T000000 orderID: O9999 symbol: XYZ eventTimestamp: 20170801T143035.923456 manualFlag: false cancelQty: senderIMID: 123:BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12350 session: 1109	
11	Exchange 1 receives the instructions from the Trading Desk	*Exchange 1 reports a Participant **Order Cancelled event***	
12	Trading Desk cancels the order per the Sales Desk's instructions	*Broker 1 reports an **Order Internal Route Cancelled event*** type: MEIC orderKeyDate: 20170801T000000 orderID: O9999 symbol: XYZ eventTimestamp: 20170801T143035.923456 manualFlag: false cancelQty: 2000 leavesQty: 0 requestTimestamp:	The Trading Desk is required to report an Order Internal Route Cancelled event reflecting the time the internal route was cancelled. In this example, this is the time that acknowledgement was received from the exchange. Since the Order Internal Route Cancel Request event was reported, the *requestTimestamp* in the Order Internal Route Cancelled event must be blank.
13	Sales Desk cancels the order per the customer's instruction	*Broker 1 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20170801T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20170801T143036.223456 manualFlag: false cancelQty: 1000 leavesQty: 0 initiator: C requestTimestamp:	In its Order Cancelled event, the Sales Desk is required to report the time the order was Cancelled. In this example, this is the event time that acknowledgement was received from the Trading Desk. Since the Order Cancel Request event was reported, the *requestTimestamp* in the Order Cancelled event must be blank.

2.4.9. Order is Received from Another Broker-Dealer and Internally Routed, Subsequent Modification is Requested Directly at the Desk Holding the Order

This scenario illustrates the CAT reporting requirements when an Industry Member receives an order from another broker-dealer at the Sales Desk, and internally routes the order to a Trading Desk upon receipt. The broker-dealer that sent the order then requests a modification directly at the Trading Desk.

Since the modification was requested directly at the Trading Desk, the Sales Desk does not have an obligation to report the receipt or confirmation of the modification.
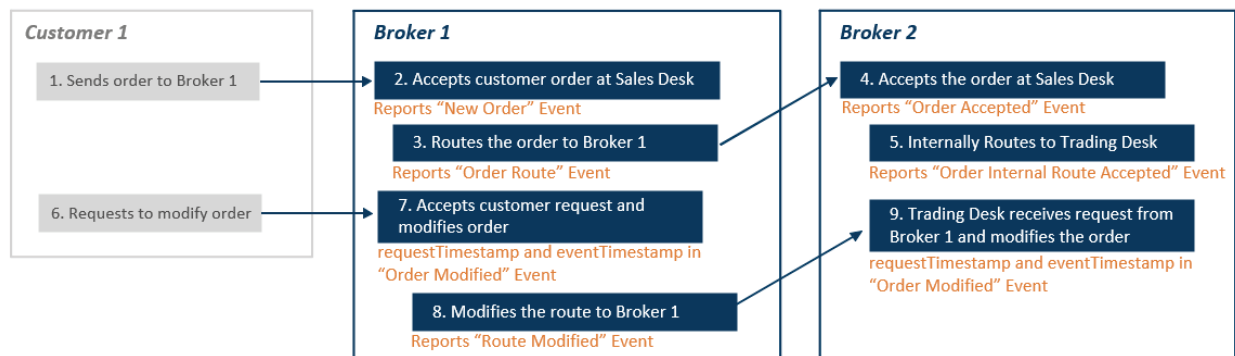
Industry Member Broker 1 is required to report the following:

- The origination of a proprietary order (New Order event)
- Route of the order to Broker 2 (Order Route event)
- The confirmation of the modification (Order Modified event)
- The modification of the route sent to Broker 2 (Route Modified event)

Industry Member Broker 2 is required to report the following for each desk:

- At the Sales Desk
  - ◆ The receipt of the order from Broker 1 (Order Accepted event)
- At the Trading Desk
  - ◆ The receipt of the internal route from the Sales Desk (Order Internal Route Accepted event)
  - ◆ The receipt of the modification request from Broker 1 (*requestTimestamp* in Order Modified event)
  - ◆ The confirmation of the modification (*eventTimestamp* in Order Modified event)

Since the modification was received from another Broker-Dealer, the Trading Desk at Broker 2 must report an Order Modified event in order to capture the route linkage criteria, including the *routedOrderID* of the route received from Broker 1. If the modification was received from a non-broker dealer and route linkage criteria is not required, Broker 2 may report either an Order Modified event or an Order Internal Route Modified event.

In its Order Modified events, the Broker 1 and Broker 2 are required to capture the time the order was Modified (e.g., the time that the order was confirmed to be cancelled in the firm's OMS/EMS). Depending on the firm's order flow, this may be the same time the request is received, or this may be the time acknowledgement is received. In this example, the *eventTimestamp* on the Order Modified event for Broker 2 represents the time the request was received from Broker 1. The *eventTimestamp* on the Order Modified event for Broker 1 represents the time that acknowledgement was received.

The Trading Desk is required to separately report the receipt of Broker 1's request to modify the order either through the *requestTimestamp* in its Order Modified event or through a separate Order Modification Request event.

#	Step	Reported Event	Comments
1	Broker 1 originates a new proprietary order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: T side: SL price: 10.02 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false firmDesignatedID: P5678 accountHolderType: P affiliateFlag: false infoBarrierID: DSK5555 negotiatedTradeFlag: false representativeInd: N	
2	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: O11111	

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20170801T143030.223456 manualFlag: false senderIMID: 123:BRK1 destination: 456:BRK2 destinationType: F routedOrderID: S9O12350 side: SL price: 10.02 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
3	Broker 2 accepts the order at the Sales Desk	Broker 2 reports an **Order Accepted event** type: MEOA orderKeyDate: 20170801T000000 orderID: B12345 symbol: XYZ eventTimestamp: 20170801T143030.323456 manualFlag: false receiverIMID: 456:BRK2 senderIMID: 123:BRK1 senderType: F routedOrderID: S9O12350 affiliateFlag: false deptType: A side: SL price: 10.02 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA custDspIntrFlag: false infoBarrierID: SAL432	
4	Sales Desk internally routes the order to Trading Desk	*Broker 2 reports an **Order Internal Route Accepted event*** type: MEIR orderKeyDate: 20170801T000000 orderID: O9999 symbol: XYZ parentOrderKeyDate: 20170801T000000	In this example, the Trading Desk, upon receipt of the internal route, assigns a new Order Key with *orderID* O9999. The Parent Order Key with *orderID* B12345 must be populated in the *parentOrderID* field. The Parent Order Key links the Order Internal Route

#	Step	Reported Event	Comments
		parentOrderID: B12345 eventTimestamp: 20170801T143031.423456 manualFlag: false deptType: T receivingDeskType: T infoBarrierID: DSK9999 side: SL price: 10.02 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	Accepted event with the New Order event.
5	Broker 1 modifies the order	*Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20170801T000000 orderID: O34567M symbol: XYZ priorOrderKeyDate: 20170801T000000 priorOrderID: O11111 eventTimestamp: 20170801T143044.723456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: F side: SL price: 10.01 quantity: 2000 leavesQty: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA custDspIntrFlag: false	Since Broker 1 is generating a new order key with *orderID* O3456M, the Prior Order Key with *orderID* O11111 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with the Order Accepted event. In this example, the *eventTimestamp* for Broker 1 reflects the time that acknowledgement was received from Broker 2.
6	Broker 1 modified the route to Broker 2	*Broker 1 reports a **Route Modified event*** type: MEMR orderKeyDate: 20170801T000000 orderID: O34567M symbol: XYZ eventTimestamp: 20170801T143044.623456 manualFlag: false senderIMID: 123:BRK1 destination: 456:BRK2	Alternatively, Broker 1 may report a Route Cancelled and new Order Route event instead of a Route Modified event.

#	Step	Reported Event	Comments
		destinationType: F routedOrderID: MAO222 priorRoutedOrderID: S9O12350 side: SL price: 10.01 quantity: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA	
7	Broker 2's Trading Desk receives the request from Broker 1 and confirms the modification	*Broker 2 reports an **Order Modified event*** type: MEOM orderKeyDate: 20170801T000000 orderID: OM9999 symbol: XYZ priorOrderKeyDate: 20170801T000000 priorOrderID: O9999 eventTimestamp: 20170801T143044.623456 manualFlag: false receiverIMID: 456:BRK2 senderIMID: 123:BRK1 senderType: F routedOrderID: MAO222 initiator: C side: SL price: 10.01 quantity: 2000 leavesQty: 2000 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG isoInd: NA custDspIntrFlag: false infoBarrierID: requestTimestamp: 20170801T143044.623456	In this example, since the modification was received from another broker-dealer, this step must be reported as an Order Modified event and not an Internal Route Modified event. The *priorOrderID* must be populated with the orderID of the related Internal Route event at the Trading Desk. Since Broker 2 captures the request time through the *requestTimestamp* field, a separate MEOMR event must not be reported. The *initiator* flag is populated with a value of 'C', as the trading desk at Broker 2 modified the order based on instructions from Broker 1.

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 Members are required to capture the *eventTimestamp* in Order Modified events reflecting the time the order was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). Industry Members are also required to capture the time that the request was received from the customer either in the *requestTimestamp* field in the Order Modified event, or in a separate Order Modification Request event, as illustrated in Options 1 and 2 below. In this example, the *eventTimestamp* reflects the same time that the request was received from the customer.

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*. In addition to illustrating the use of the *requestTimestamp* field, Option 1 illustrates how a modification must be reported when a new Order Key is not assigned. In addition to illustrating the use of the Order Modification Request event, Option 2 illustrates how a modification must be reported when a new Order Key is assigned.

Option 1:
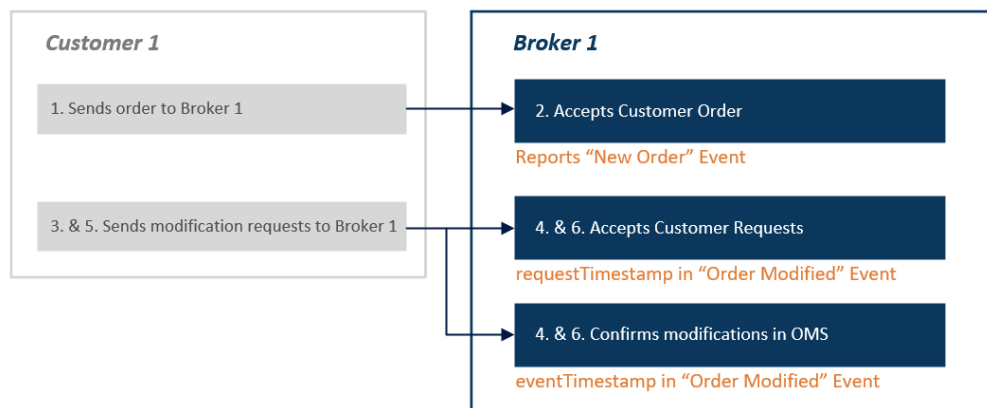
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The receipt of the customer modification requests (*requestTimestamp* in Order Modified event)
- The confirmation of the customer modification (*eventTimestamp* in Order Modified event)

Since Broker 1 is populating the *requestTimestamp* field in the Order Modified event, an Order Modification Request event must not be reported.

Option 2:

Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The receipt of the customer modification requests (Order Modification Request events)
- The confirmation of the customer modification (Order Modified event)

Since Broker 1 is reporting a separate Order Modification Request event in this example, the *requestTimestamp* in the Order Modified event must be blank.

#	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 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	

#	Step	Reported Event		Comments
3	Customer sends the modification request to the Broker 1	*NA*		
4	The customer request is received, and the order is modified at the firm	**OPTION 1** *Broker 1 reports an **Order Modified event** using the requestTimestamp.* 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 requestTimestamp: 20180417T143035.236456	**OPTION 2** *Broker 1 reports an **Order Modification Request event*** type: MEOMR orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ eventTimestamp: 20180417T143035.236456 manualFlag: false receiverIMID: senderIMID: senderType: side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false *Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: OM1234 symbol: XYZ priorOrderKeyDate: 20180417T000000 priorOrderID: O12321 eventTimestamp: 20180417T143035.236456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID:	In this example, the *eventTimestamp* in the Order Modified events is the same time that the request was received from the customer. Option 1: Since the *requestTimestamp* is populated, Broker 1 must not report a separate Order Modification Request event. Since 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. Option 2: Since an Order Modification Request event was reported, the *requestTimestamp* in the Order Modified event must be blank. Since 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. The Order Modification Request event must maintain the same *orderID* O12321 as the New Order event for which the modification is being requested. In both options: Since the modification was received from a non-CAT reporting customer, the *receiverIMID,*

#	Step	Reported Event		Comments
			initiator: C side: B price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false requestTimestamp:	*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 request is received and the order is modified at the firm	**OPTION 1** *Broker 1 reports an **Order Modified event** using the requestTimestamp* 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 requestTimestamp: 20180417T143041.046151	**OPTION 2** *Broker 1 reports an **Order Modification Request event*** type: MEOMR orderKeyDate: 20180417T000000 orderID: OM1234 symbol: XYZ eventTimestamp: 20180417T143041.046151 manualFlag: false receiverIMID: senderIMID: senderType: side: B price: 10.01 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false *Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000	In this example, the *eventTimestamp* in the Order Modified events is the same time that the request was received from the customer. Option 1: Since the *requestTimestamp* is populated, Broker 1 must not report a separate Order Modification Request event. Since 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 previous Order Modified event using the Order Key. Option 2: Since an Order Modification Request event was reported, the *requestTimestamp* in the Order Modified event must be blank. Since a new Order Key is assigned, the Prior Order Key with *orderID* OM1234 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with

#	Step	Reported Event	Comments
		orderID: OM3456 symbol: XYZ priorOrderKeyDate: 20180417T143041.046151 priorOrderID: OM1234 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 requestTimestamp:	the previous Order Modified event. The Order Modification Request event must maintain the same *orderID* OM1234 as the previous Order Modified event for which the modification is being requested. In both options: 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.

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

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

Industry Members are required to capture the *eventTimestamp* in Order Modified events reflecting the time the order was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). In this example, the *eventTimestamp* reflects the time that acknowledgement was received from the exchange. Industry Members are also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Modified event, or in a separate Order Modification Request event. In this scenario, the modification is reflected using the *requestTimestamp* in the Order Modified event.

For the exchange route portion of the scenario, the Industry Member may report either a modification of the route that was sent to the exchange or the cancellation of the original route that was sent to the exchange followed by a new route based on its order handling practices, as illustrated in Options 1 and 2 below.

Option 1:

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 receipt of the customer modification request (*requestTimestamp* in Order Modified event)
- The confirmation of the customer modification (*eventTimestamp* in Order Modified event)
- The modification of the route of the modification to the exchange (Route Modified event)

Option 2:

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 receipt of the customer modification request (*requestTimestamp* in Order Modified event)

- The confirmation of the customer modification (*eventTimestamp* in Order Modified event)

- The cancellation of the original route of the modification to the exchange (Route Cancelled 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: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: RTAO12321 session: s6 side: B price: 9.99	

#	Step	Reported Event		Comments
		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 requests the modification	*NA*		
6	The customer request is received and the order is modified at the firm	*Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: OM12322 symbol: XYZ priorOrderKeyDate: 20180417T000000 priorOrderID: O12321 eventTimestamp: 20180417T143032.236456 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 requestTimestamp: 20180417T143030.654456		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 In this example, the *eventTimestamp* is the time that acknowledgement was received from the exchange, which is after the *eventTimestamp* in the corresponding events in step 7. Since the *requestTimestamp* is populated, Broker 1 must not report a separate Order Modification Request event.
7	Broker 1 communicates the modification to EXCH1	***OPTION 1*** *Broker 1 reports a **Route Modified event***	***OPTION 2*** *Broker 1 reports a **Route Cancelled event***	In Option 1, Broker 1 reports a Route Modified event and assigns a new *routedOrderID* RTAO5555. The

#	Step	Reported Event		Comments
		type: MEMR orderKeyDate: 20180417T000000 orderID: OM12322 symbol: XYZ eventTimestamp: 20180417T143032.236456 manualFlag: false senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: RTAO555 priorRoutedOrderID: RTAO12321 session: s6 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA dupROIDCond: false	type: MECR orderKeyDate: 20180417T000000 orderID: OM12322 symbol: XYZ eventTimestamp: 20180417T143032.236456 manualFlag: false cancelQty: 1000 senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: RTAO12321 session: s6 *Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: OM12322 symbol: XYZ eventTimestamp: 20180417T143032.236456 manualFlag: false senderIMID: 123: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	*priorRoutedOrderID* field must be populated with the *routedOrderID* of the route being modified RTAO12321, and the *dupROIDCond* must be 'false'. In Option 2, Broker 1 reports a Route Cancelled event for *routedOrderID* RTAO12321 and reports a new Order Route event for *routedOrderID* RTAO5555 In its MEMR/MECR event, Broker 1 may reference either the *orderID* of the original Order Route event, or the *orderID* of the immediately preceding Order Modified event.
8	EXCH1 updates the order	**OPTION 1** *Exchange 1 reports a Participant **Order Modified event***	**OPTION 2** *Exchange 1 reports a Participant **Order Cancelled event** and **Order Accepted event***	

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

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

Industry Members are required to capture the *eventTimestamp* in Order Modified events reflecting the time the order was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). In this example, the *eventTimestamp* for Broker 1 reflects the time that acknowledgement was received from Broker 2, and the *eventTimestamp* for Broker 2 reflects the same time that the request was received from Broker 1. Industry Members are also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Modified event, or in a separate Order Modification Request event. In this example, Broker 1 reports a separate Order Modified and Order Modification Request events, and Broker 2 reports an Order Modified event using the *requestTimestamp* field.

For the interfirm route portion of the scenario, Industry Member Broker 1 routing the order may report either a modification of the route that was sent or the cancellation of the original route that was sent to Broker 2 followed by a new route based on its order handling practices, as illustrated in Options 1 and 2 below.

Option 1:

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 receipt of the customer modification request (*requestTimestamp* in Order Modified event)
- The confirmation of the customer modification (*eventTimestamp* in Order Modified event)
- The modification of the route of the modification to Broker 2 (Route Modified event)

Industry Member Broker 2 is required to report:

- The receipt of the order from Broker 1 (Order Accepted event)
- The receipt of the modification request from Broker 1 (*requestTimestamp* in Order Modified event)
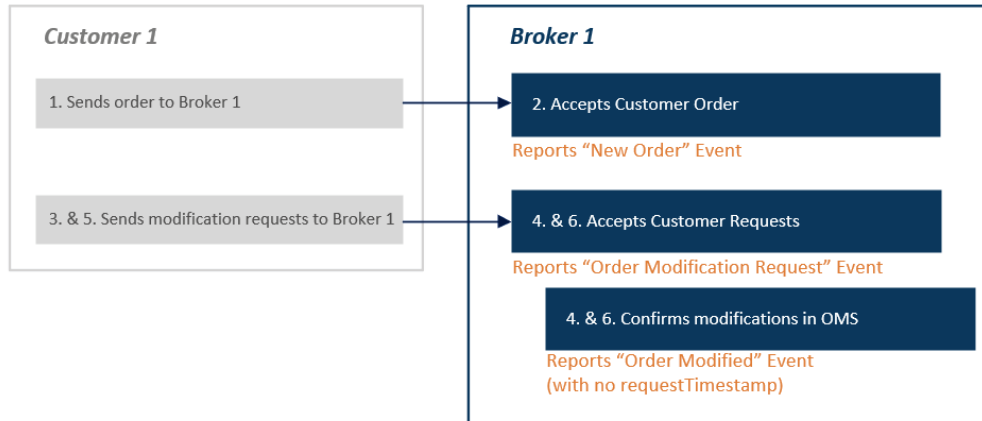- The confirmation of the modification (*eventTimestamp* in Order Modified event)

Option 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)
- The receipt of the customer modification request (*requestTimestamp* in Order Modified event)
- The confirmation of the customer modification (*eventTimestamp* in Order Modified event)
- The cancellation of the original route of the modification to Broker 2 (Route Cancelled 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 receipt of the modification request from Broker 1 (*requestTimestamp* in Order Modified event)
- The confirmation of the modification (*eventTimestamp* in Order Modified event)

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

#	Step	Reported Event	Comments
	Broker 1		
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: 123:FRMA destination: 4576:FRMB destinationType: F routedOrderID: AO222 side: B price: 9.99 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	

#	Step	Reported Event		Comments
		orderID: O34567 symbol: XYZ eventTimestamp: 20180417T143035.323556 manualFlag: false receiverIMID: 456:FRMB senderIMID: 123: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 requests the modification	*NA*		Customer amends order to price of $10.00
6	The customer request is received by Broker 1	*Broker 1 reports an **Order Modification Request event*** type: MEOMR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143042.134333 manualFlag: false receiverIMID: senderIMID: senderType: side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false		The Order Modification Request event must maintain the same *orderID* O23456 as the New Order event for which the modification is being requested.
7	Broker 1 communicates the modification to Broker 2	***Option 1*** *Broker 1 reports a **Route Modified event*** type: MEMR	***Option 2*** *Broker 1 reports a **Route Cancelled event*** type: MECR	In Option 1, Broker 1 reports a Route Modified event and assigns a new *routedOrderID* MAO222. The *priorRoutedOrderID* field must be populated with the *routedOrderID* of the route being modified

#	Step	Reported Event		Comments
		orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143042.234333 manualFlag: false senderIMID: 123:FRMA destination: 4576:FRMB destinationType: F routedOrderID: MAO222 priorRoutedOrderID: AO222 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA dupROIDInd: false	orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143042.234333 manualFlag: false senderIMID: 123:FRMA destination: 4576:FRMB destinationType: F routedOrderID: AO222 *Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143042.234333 manualFlag: false senderIMID: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: MAO222 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	AO222, and the *dupROIDCond* must be 'false'. In Option 2, Broker 1 reports a Route Cancelled event for *routedOrderID* AO222 and reports a new Order Route event for *routedOrderID* MAO222 The events in this step may contain the *orderID* of the related New Order event O23456 or the related Order Modified event in Step 9 O23456M
8	Broker 2 receives the request from Broker 1 and 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: 20180417T143042.524333 manualFlag: false receiverIMID: 456: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. In this example, the

#	Step	Reported Event	Comments
		senderIMID: 123: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 requestTimestamp: 20180417T143042.524333	*eventTimestamp* for Broker 2 reflects the same time that the request was received from Broker 1. Since the *requestTimestamp* is populated, Broker 2 must not report a separate Order Modification Request event.
9	Broker 2 confirms the modification in its OMS	*Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: O23456M symbol: XYZ priorOrderKeyDate: 20180417T000000 priorOrderID: O23456 eventTimestamp: 20180417T143042.724333 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: B price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false requestTimestamp:	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. In this example, the *eventTimestamp* for Broker 1 reflects the time that acknowledgement was received from Broker 2, which is after the *eventTimestamp* of the corresponding Order Route event. Since an Order Modification Request event was reported, the *requestTimestamp* in the Order Modified event must be blank.

2.5.4. System Driven Modification of Previously Routed Order

This scenario illustrates the CAT reporting requirements when an Industry Member receives a customer order with instructions to handle the order using a specific proprietary trading algorithm.[1] The Industry Member routes the order using its trading algorithm to another Industry Member, and then the trading algorithm modifies the route. In this scenario, since the order modification was initiated by the trading algorithm, the routing Industry Member Broker 1 is required to report a Route Modified event.
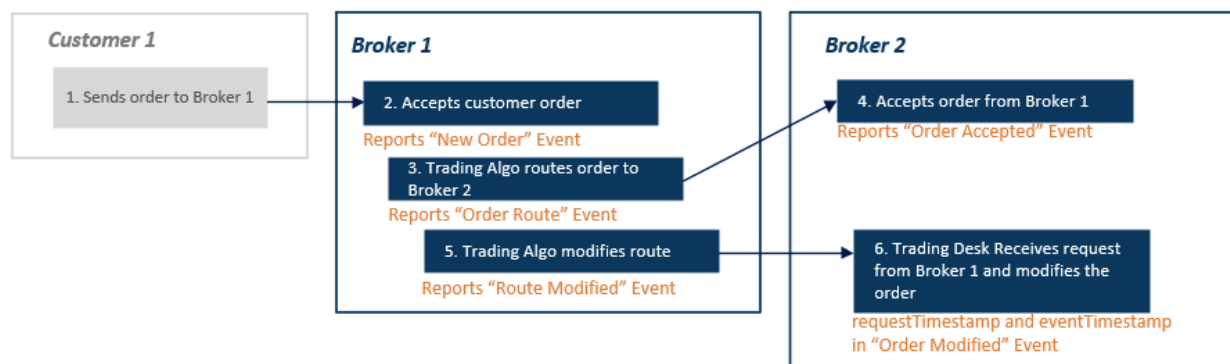
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event with *handlingInstructions* of 'ALG')
- The route of the order to Broker 2 (Order Route event)
- The modification of the route by the trading algorithm (Route Modified event)

Industry Member Broker 2 is required to report:

- The receipt of the order from Broker 1 (Order Accepted event)
- The receipt of the customer modification request (*requestTimestamp* in Order Modified event)
- The confirmation of the customer modification (*eventTimestamp* in Order Modified event)

Refer to CAT FAQ D29 for information on populating *handlingInstructions* for orders received or originated with instructions to work the order using a trading algorithm.

Industry Members are required to capture the *eventTimestamp* in Order Modified events reflecting the time the order was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). In this example, the *eventTimestamp* for Broker 2 reflects the same time that the request was received from Broker 1. Industry Members are also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Modified event, or in a separate

---

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

Order Modification Request event. In this example, Broker 2 reports the *requestTimestamp* field in its Order Modified event.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1 with instructions to handle the order using a trading algorithm	*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 handlingInstructions: ALG tradingSession: REG custDspIntrFlag: false firmDesignatedID: PR001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Broker 1 is required to populate the value of 'ALG' in the *handlingInstructions* field to indicate that the order was received with instructions to handle using a specific proprietary trading algorithm.
3	Broker 1's trading algorithm determines to route 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: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: AO222 side: B	In this example, Broker 1 must not populate the value of 'ALG' in the *handlingInstructions* field, as this route was generated based on the trading algorithm, and is not being sent to a destination with instructions to use a trading algorithm.

#	Step	Reported Event	Comments
		price: 9.98 quantity: 500 orderType: LMT timeInForce: GTT =20180417T143036.000000 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: 456:FRMB senderIMID: 123: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: NAcustDspIntrFlag: false	
5	Broker 1's trading algorithm reduces the quantity to 300 shares	*Broker 1 reports a **Route Modified event*** type: MEMR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.524333 manualFlag: false senderIMID: 123:FRMA destination: 456:FRMB destinationType: F	If Broker 1's trading algorithm cancelled the original route and sent a new route, Broker 1 could alternatively report a MECR event followed by a new MEOR event.

#	Step	Reported Event	Comments
		routedOrderID: AO223 priorRoutedOrderID: AO222 side: B price: 9.98 quantity: 300 orderType: LMT timeInForce: GTT =20180417T143036.000000 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: dupROIDCond: false	
6	Broker 2 modifies the order per Broker 1's instruction	*Broker 2 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: O34567M symbol: XYZ priorOrderKeyDate: 20170417T000000 priorOrderID: O34567 eventTimestamp: 20180417T143035.524333 manualFlag: false receiverIMID: 456:FRMB senderIMID: 123: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 requestTimestamp: 20180417T143035.524333	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. In this example, the receipt time of the request is captured in the *requestTimestamp* field on the Order Modified event. Broker 2 may alternatively capture the request time using a separate Order Modification Request event.

2.5.5. Manual Route, Followed by an Electronic Modification

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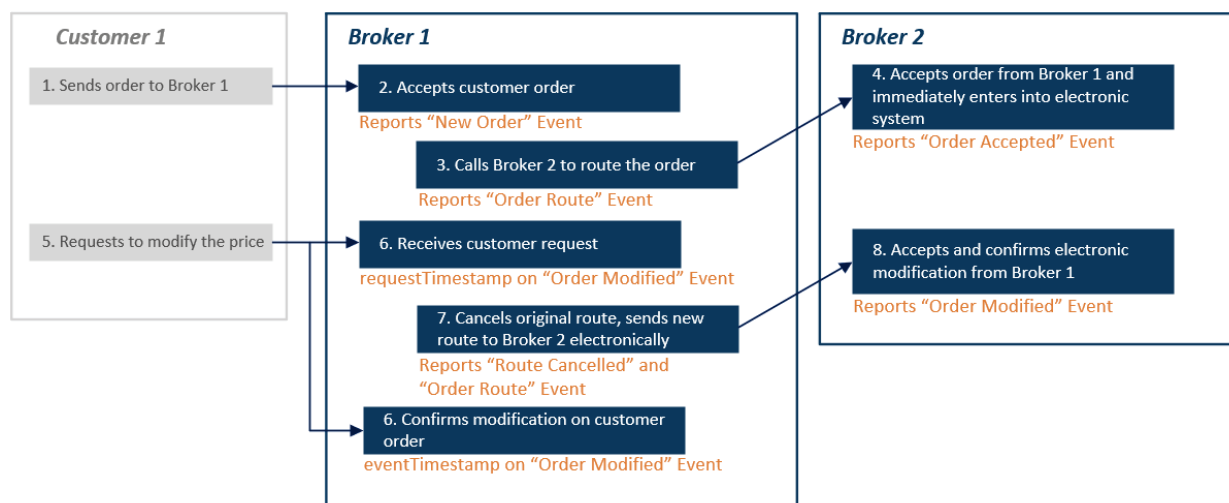
Industry Member Broker 1 is required to report:

- 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 cancellation of the original Order Route event (Route Cancelled 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.

Industry Members are required to capture the *eventTimestamp* in Order Modified events reflecting the time the order was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). In this example, the *eventTimestamp* for Broker 1 reflects the time that acknowledgement was received from Broker 2, and the *eventTimestamp* for Broker 2 reflects the same time that the request

was received from Broker 1. Industry Members are also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Modified event, or in a separate Order Modification Request event. In this example, the request time is captured in the *requestTimestamp* field on the Order Modified events.

#	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: 123:BRK1 destination: 456:BRK2 destinationType: F routedOrderID: side: B	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
		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: 456:BRK2 senderIMID: 123: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 requests the modification to reduce the order quantity.	NA	
6	Broker 1 receives the customer request and the order is modified electronically per the customer's instructions	*Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: O34567M symbol: XYZ priorOrderKeyDate: 20180417T000000 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, senderType,* and *routedOrderID* fields

#	Step	Reported Event	Comments
		eventTimestamp: 20180417T143110.223456 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 requestTimestamp: 20180417T143109.529456	are not required. In this example, the *eventTimestamp* for Broker 1 reflects the time that acknowledgement was received from Broker 2, which is after the *eventTimestamp* of the corresponding Order Route event. In this example, the receipt time of the customer request is captured in the *requestTimestamp* field on the Order Modified event. Broker 1 may alternatively capture the request time using a separate Order Modification Request event.
7	Broker 1 sends a new route to Broker 2 electronically reflecting the modification and cancels the original route	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O34567M symbol: XYZ eventTimestamp: 20180417T143110.140456 manualFlag: false senderIMID: 123:BRKR1 destination: 456:BRKB2 destinationType: F routedOrderID: RTO34567 side: B price: 9.99 quantity: 900 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA *Broker 1 reports a **Route Cancelled event*** type: MECR	If Broker 1 modified the original route instead of sending a new route, Broker 1 could alternatively report a MEMR event. In its /MECR event, Broker 1 may reference either the *orderID* of the original Order Route event, or the *orderID* of the immediately preceding Order Modified event.

#	Step	Reported Event	Comments
		orderKeyDate: 20180417T000000 orderID: O34567M symbol: XYZ eventTimestamp: 20180417T143110.140456 manualFlag: true cancelQty: 900 electronicTimestamp: senderIMID: 123:BRK1 destination: 456:BRK2 destinationType: F routedOrderID:	
8	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 priorOrderKeyDate: 20180417T000000 priorOrderID: B2O908 eventTimestamp: 20180417T143110.140456 manualFlag: false receiverIMID: 456:BRK2 senderIMID: 123: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 requestTimestamp: 20180417T143110.140456	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. In this example, the *eventTimestamp* for Broker 2 reflects the time that the request was received from Broker 1.

2.5.6. 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.
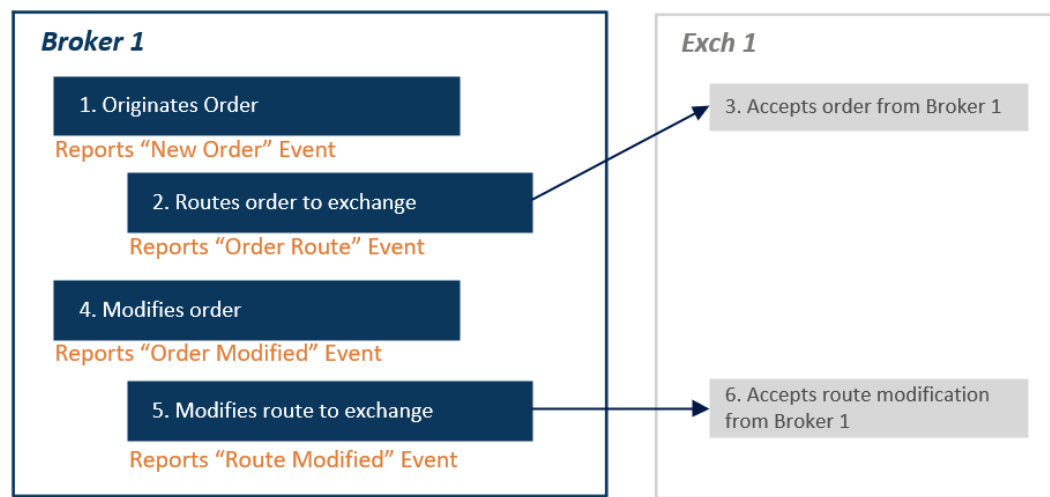
Industry Member Broker 1 is required to report:

- The origination of a principal order (New Order event)
- The route to an exchange (Order Route event)
- The order modification (Order Modified event) The modification of the exchange route (Route Modified event)

Industry Members are required to capture the *eventTimestamp* in Order Modified events reflecting the time the order was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). In this example, the *eventTimestamp* for Broker 1 reflects the time that acknowledgement was received from the exchange.

#	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	

#	Step	Reported Event	Comments
		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: P affiliateFlag: false negotiatedTradeFlag: false 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: 123: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	Broker 1 modifies the order and assigns a new Order Key with *orderID* O2500-1. The Prior Order Key with *orderID*

#	Step	Reported Event	Comments
		orderKeyDate: 20180417T000000 orderID: O2500-1 symbol: XYZ priorOrderKeyDate: 20180417T000000 priorOrderID: O2500-0 eventTimestamp: 20180417T143031.536456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: F side: B price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false representativeInd: N requestTimestamp:	O2500-0 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Modified event with the New Order event. In this example, the *eventTimestamp* for Broker 1 reflects the time that acknowledgement was received from the exchange, which is after the *eventTimestamp* of the corresponding Route Modified event. Broker 1 is not required to capture a request time in this scenario, as the modification was originated by the firm.
5	Broker 1 routes the modification to EXCH1	*Broker 1 reports a **Route Modified event*** type: MEMR orderKeyDate: 20180417T000000 orderID: O2500-1 symbol: XYZ eventTimestamp: 20180417T143031.436456 manualFlag: false senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: ROID-001 priorRoutedOrderID: session: s6 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false	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. If Broker 1 cancelled the original route and sent a new route instead of modifying the route, Broker 1 could alternatively report a MECR and MEOR event. In its MEMR event, Broker 1 may reference either the *orderID* of the original Order Route event, or the *orderID* of the immediately preceding Order Modified event.

#	Step	Reported Event	Comments
		isoInd: NA dupROIDCond: true	
6	EXCH1 updates order	*Exchange 1 reports a Participant* **Order Modified event**	

2.5.7. 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.
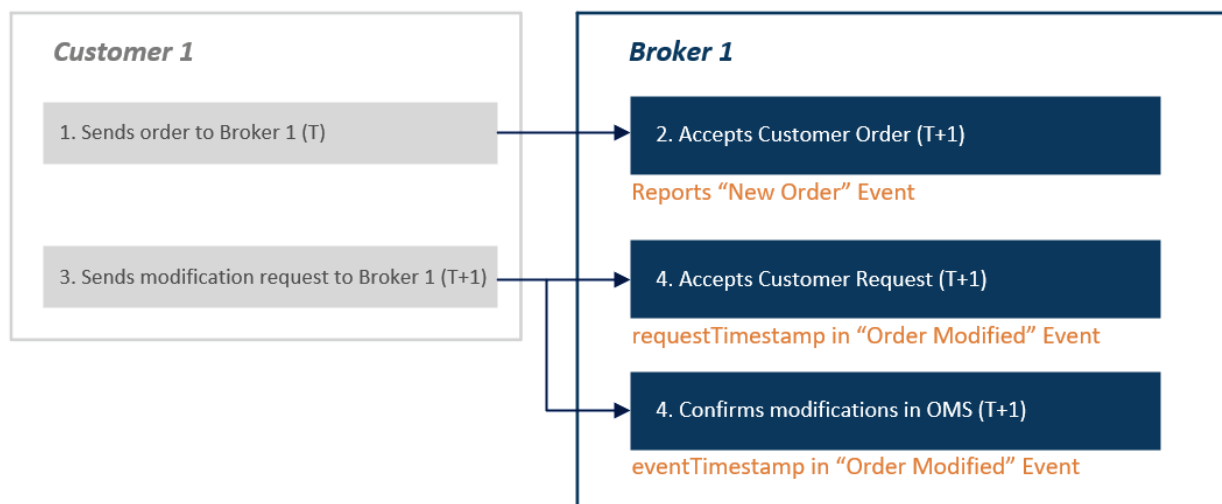
Industry Member Broker 1 is required to report:

- The receipt of the customer order on T (New Order event)
- The receipt of the customer modification request on T+1 (*requestTimestamp* in Order Modified event)
- The confirmation of the customer modification on T+1 (*eventTimestamp* in Order Modified event)

Industry Members are required to capture the *eventTimestamp* in Order Modified events reflecting the time the order was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). Industry Members are also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Modified event, or in a separate Order Modification Request event. In this example, the *eventTimestamp* reflects the same time that the request was received from the customer. In this example, the request time is captured in the *requestTimestamp* field on the Order Modified events.

#	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 orderKeyDate: 20180418T000000 orderID: OM12322 symbol: XYZ priorOrderKeyDate: 20180417T0000000 priorOrderID: O12321 eventTimestamp: 20180418T143035.236456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: B	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. 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. In this example, the receipt time of

#	Step	Reported Event	Comments
		price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: GTC tradingSession: REG custDspIntrFlag: false representativeInd: N requestTimestamp: 20180418T143035.236456	the customer request is captured in the *requestTimestamp* field on the Order Modified event. Broker 1 may alternatively capture the request time using a separate Order Modification Request event.

2.5.8. 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.
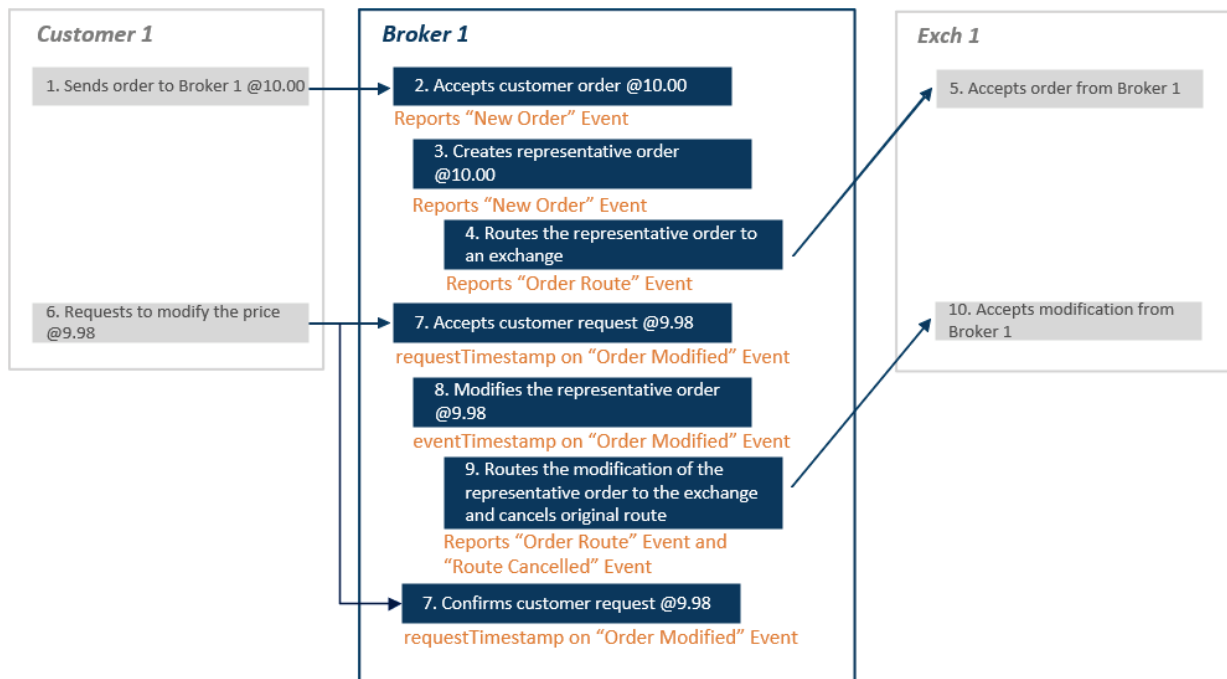
Industry Member Broker 1 is required to report the following for the Customer Order:

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

- The receipt of the customer modification request (*requestTimestamp* in Order Modified event)

- The confirmation of the modification of the representative order (*eventTimestamp* in Order Modified Event)

Industry Member Broker 1 is required to report the following for the Representative Order:

- The generation of a representative order (New Order event)
- The route of the representative order to an exchange (Order Route event)
- The route of the modification to the exchange (Order Route event)
- The cancellation of the original route to the exchange (Route Cancelled event)
- The confirmation of the customer modification (*eventTimestamp* in Order Modification event)

Explicit linkage between the customer order and the representative order is required through the *aggregatedOrders* field on the representative New Order event.

Industry Members are required to capture the *eventTimestamp* in Order Modified events reflecting the time the order was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). In this example, the *eventTimestamp* in both MEOM events reported by Broker 1 reflects the time that acknowledgement was received from the exchange. Industry Members are also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Modified event, or in a separate Order Modification Request event. In this example, the request time is captured in the *requestTimestamp* field on the Order Modified events.

#	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	

#	Step	Reported Event	Comments
		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. 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 eventTimestamp: 20170801T143031.123456 manualFlag: false senderIMID: 123:BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12350 session: 1109 side: B	

#	Step	Reported Event	Comments
		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 receives the customer request and 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: 20170801T143036.123456 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 representativeInd: N requestTimestamp: 20170801T143035.623456	In this example, the *eventTimestamp* reflects the time that acknowledgement was received from the exchange, which is after the *eventTimestamp* of the corresponding Order Route event. In this example, the receipt time of the customer request is captured in the *requestTimestamp* field on the Order Modified event. Broker 1 may alternatively capture the request time using a separate Order Modification Request event.
8	Broker 1 modifies the limit price on the corresponding representative order	*Broker 1 reports an **Order Modified event*** type: MEOM 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.

| #	Step	Reported Event	Comments
		orderID: OM12350 symbol: XYZ priorOrderKeyDate: 20170801T000000 priorOrderID: O12350 eventTimestamp: 20170801T143036.123456 manualFlag: false receiverIMID: senderIMID: senderType: routedOrderID: initiator: F side: B price: 9.98 quantity: 500 leavesQty: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false aggregatedOrders: OM12345@20170801T000000@@ representativeInd: Y requestTimestamp:	The *aggregatedOrders* field must be populated, and must reflect the change in *orderID* of the related customer order. In this example, the *eventTimestamp* reflects the time that acknowledgement was received from the exchange. In accordance with FAQ B63, the *initiator* field must be populated with a value of 'F'. Since the modification on the representative order was initiated by the firm, the *requestTimestamp* field is not required to be populated.
9	Broker 1sends a new route to the exchange reflecting the modification of the representative order and cancels the original route	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: OM12350 symbol: XYZ eventTimestamp: 20170801T143035.823456 manualFlag: false senderIMID: 123:BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12360 session: 1109 side: B price: 9.98 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false	If Broker 1 modified the route instead of cancelling the original route and sending a new route, Broker 1 could alternatively report a MEMR event. In its MECR event, Broker 1 may reference either the *orderID* of the original Order Route event, or the *orderID* of the immediately preceding Order Modified event.

#	Step	Reported Event	Comments
		isoInd: NA *Broker 1 reports a **Route Cancelled event*** type: MECR orderKeyDate: 20170801T000000 orderID: OM12350 symbol: XYZ eventTimestamp: 20170801T143035.823456 manualFlag: false senderIMID: 123:BRK1 destination: Exch1 destinationType: E routedOrderID: S9O12350 session: 1109	
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 Members are required to capture the *eventTimestamp* in Order Cancelled events reflecting the time the order was cancelled (e.g., the time that the order was confirmed to be cancelled in the firm's OMS/EMS). Industry Members are also required to capture the time that the request was received from the customer either in the *requestTimestamp* field in the Order Cancelled event, or in a separate Order Cancel Request event, as illustrated in Options 1 and 2 below. In this example, the *eventTimestamp* reflects the same time that the request was received from the customer.

For illustration purposes, actions taken by the Broker between the receipt of the original order and the cancellation are not included.

Option 1:
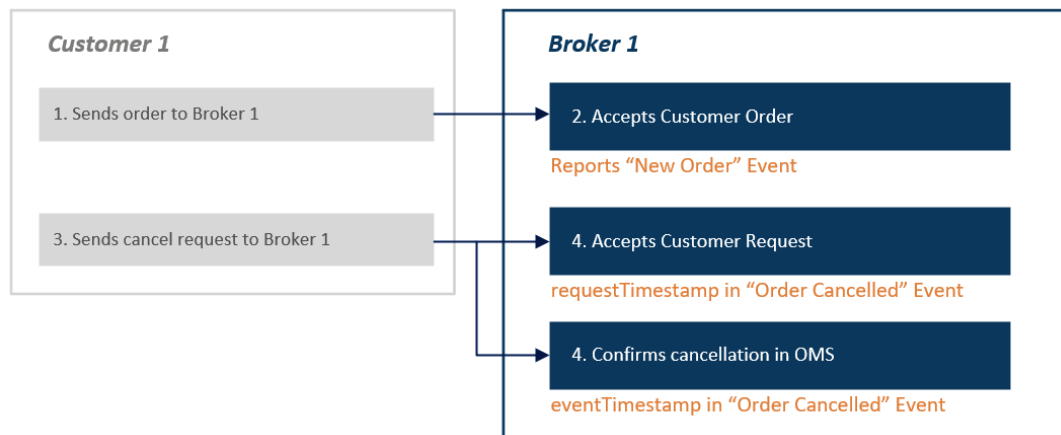
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The receipt of the customer cancellation request (*requestTimestamp* in Order Cancelled event)
- The confirmation of the cancellation (*eventTimestamp* in Order Cancelled event)

Since Broker 1 is populating the *requestTimestamp* field in the Order Cancelled event, an Order Cancel Request event must not be reported.

Option 2:

Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The receipt of the customer Cancellation request (Order Cancellation Request events)
- The confirmation of the cancellation (Order Cancelled event)

Since Broker 1 is reporting a separate Order Cancel Request event in this example, the *requestTimestamp* in the Order Modified event must be blank.

| #	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	Customer sends the cancel instruction to Broker 1	*NA*		
4	Broker 1 cancels the customer order	**_Option 1_** *Broker 1 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.323556 manualFlag: false cancelQty: 1000 leavesQty: 0	**_Option 2_** *Broker 1 reports an **Order Cancel Request event*** type: MEOCR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.323556 manualFlag: false cancelQty: 1000	In this example, the *eventTimestamp* in the Order Cancelled events is the same time that the request was received from the customer. Option 1: Since the *requestTimestamp* is populated, Broker 1 must not report a separate Order Cancel Request event. Option 2: Since an Order Cancel Request event was

#	Step	Reported Event		Comments
		initiator: C requestTimestamp: 20180417T143035.323556	*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 requestTimestamp:	reported, the *requestTimestamp* in the Order Cancelled event must be blank.

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 receipt of the customer's partial cancellation request (*requestTimestamp* in Order Cancelled or Order Modified event)

- The confirmation of the partial cancellation (*eventTimestamp* in 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).

Industry Members are required to capture the *eventTimestamp* in Order Cancelled/Modified events reflecting the time the order was cancelled/modified (e.g., the time that the order was confirmed to be cancelled/modified in the firm's OMS/EMS). Industry Members are also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Cancelled/Modified event, or in a separate Order Cancel/Modification Request event. In this example, the *eventTimestamp* reflects the same time that the request was received from the customer. In this example, the request time is captured in the *requestTimestamp* field on the Order Modified events.

#	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 initial order	*NA*	

#	Step	Reported Event		Comments
4	Broker 1 receives the customer request and partially cancels the order per the customer's instruction	***OPTION 1*** *Broker 1 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180417T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180417T153036.123456 manualFlag: false cancelQty: 400 leavesQty: 600 initiator: C requestTimestamp: 20180417T153036.123456	***OPTION 2*** *Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: O12345 symbol: XYZ priorOrderID: O12345 priorOrderKeyDate: 20180417T000000 eventTimestamp: 20180417T153036.123456 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 requestTimestamp: 20180417T153036.123456	In this example, the receipt time of the customer request is captured in the *requestTimestamp* field on the Order Cancelled/ Modified event. Broker 1 may alternatively capture the request time using a separate Order Cancellation/ Modification Request event.

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 based on its order handling practices.

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.

Customer 1

1. Sends order to Broker 1 (1000 shares)

6. Requests to partially cancel order (200 shares)

11. Requests to partially Cancel order (400 shares)

Broker 1

2. Accepts customer order
Reports "New Order" Event

3. Routes order to exchange
Reports "Order Route" Event

7. Receives customer request
requestTimestamp in "Order Cancelled" or "Order Modified" Event

8. Sends instructions to exchange
Reports "Route Cancelled" or "Route Modified" event

7. Confirms partial cancellation
eventTimestamp in "Order Cancelled" or "Order Modified" Event

12. Receives customer request
requestTimestamp in "Order Cancelled" or "Order Modified" Event

13. Sends instructions to exchange
Reports "Route Cancelled" or "Route Modified" event

12. Confirms partial cancellation
eventTimestamp in "Order Cancelled" or "Order Modified" Event

Exchange 1

4. Accepts order from Broker 1

5. Partially executes order (200 shares

9. Accepts partial cancellation, reduces order quantity (200 shares)

10. Partially executes order (200 shares)

14. Accepts partial cancellation, reduces order quantity (400 shares)

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)

- The receipt of the customer's partial cancellation request (*requestTimestamp* in Order Cancelled or Order Modified event)

- The modification or cancellation of the order previously routed to the exchange (Route Cancelled or Route Modified event)

- The confirmation of the partial cancellation (*eventTimestamp* in Order Cancelled or Order Modified event)

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).

Industry Members are required to capture the *eventTimestamp* in Order Cancelled/Modified events reflecting the time the order was cancelled/modified (e.g., the time that the order was confirmed to be cancelled/modified in the firm's OMS/EMS). Industry Members are also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Cancelled/Modified event, or in a separate Order Cancel/Modification Request event. In this example, the

eventTimestamp reflects the time that acknowledgement was received from the exchange. In this example, the request time is captured in the *requestTimestamp* field on the Order Modified events.

#	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: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: S5 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417	

#	Step	Reported Event		Comments
		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 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 receives the customer request and 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: 20180417T153037.623456 manualFlag: false cancelQty: 200 leavesQty: 600 initiator: C requestTimestamp: 20180417T153036.434456	***OPTION 2*** *Broker 1 reports an **Order Modified event*** type: MEOM orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ priorOrderKeyDate: priorOrderID: eventTimestamp: 20180417T153037.634456 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 requestTimestamp: 20180417T153036.434456	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. In this example, the *eventTimestamp* reflects the time that acknowledgement was received from the exchange, which is after the *eventTimestamp* of the corresponding Route Modified event or Route Cancelled event. In this example, the receipt time of the customer request is captured in the *requestTimestamp* field on the Order Cancelled/ Modified event. Broker 1 may alternatively capture the request time using a separate Order Cancellation/ Modification Request event.

#	Step	Reported Event		Comments
8	Broker 1 instructs the exchange to reduce the shares quantity of the order	**OPTION 1** *Broker 1 reports a **Route Cancelled event*** type: MECR orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153037.523456 manualFlag: false cancelQty: 200 senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: S5	**OPTION 2** *Broker 1 reports a **Route Modified event*** type: MEMR orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153037.523456 manualFlag: false senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO558 priorRoutedOrderID: XYZO555 session: S5 side: B price: 10.00 quantity: 800 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	In Option 1, since Broker 1 is reflecting the reduction using cancel events, Broker 1 would report a Route Cancelled event. In Option 2, since Broker 1 is reflecting the reduction using modification events Broker 1 would report a Route Modified event.
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	**OPTION 1** *Broker 1 reports an **Order Cancelled event***	**OPTION 2** *Broker 1 reports an **Order Modified event***	The *leavesQty* should reflect that after the previous reduction leaving 600 shares open, the order was

#	Step	Reported Event		Comments
	instruction	type: MEOC orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153038.534456 manualFlag: false cancelQty: 400 leavesQty: 0 initiator: C requestTimestamp: 20180417T153037.834456	type: MEOM orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ priorOrderKeyDate: priorOrderID: eventTimestamp: 20180417T153038.534456 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 requestTimestamp: 20180417T153037.834456	partially executed by 200 shares then reduced by 400 shares, leaving no shares open on the order. In this example, the *eventTimestamp* reflects the time that acknowledgement was received from the exchange, which is after the *eventTimestamp* of the corresponding Order Route event when using Option 2. In this example, the receipt time of the customer request is captured in the *requestTimestamp* field on the Order Cancelled/ Modified event. Broker 1 may alternatively capture the request time using a separate Order Cancellation/ Modification Request event.
13	Broker 1 instructs the exchange to reduce the shares quantity of the order	**_OPTION 1_** *Broker 1 reports a **Route Cancelled event*** type: MECR orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153038.534456 manualFlag: false cancelQty: 400 senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: S5	**_OPTION 2_** *Broker 1 reports a **Route Modified event*** type: MEMR orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153038.534456 manualFlag: false senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO560 priorRoutedOrderID: XYZO558 session: S5 side: B	In Option 1, since Broker 1 is reflecting the reduction using cancel events, Broker 1 would report a Route Cancelled evens. In Option 2, since Broker 1 is reflecting the reduction using modification events Broker 1 would report a Route Modified event.

#	Step	Reported Event		Comments
			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.

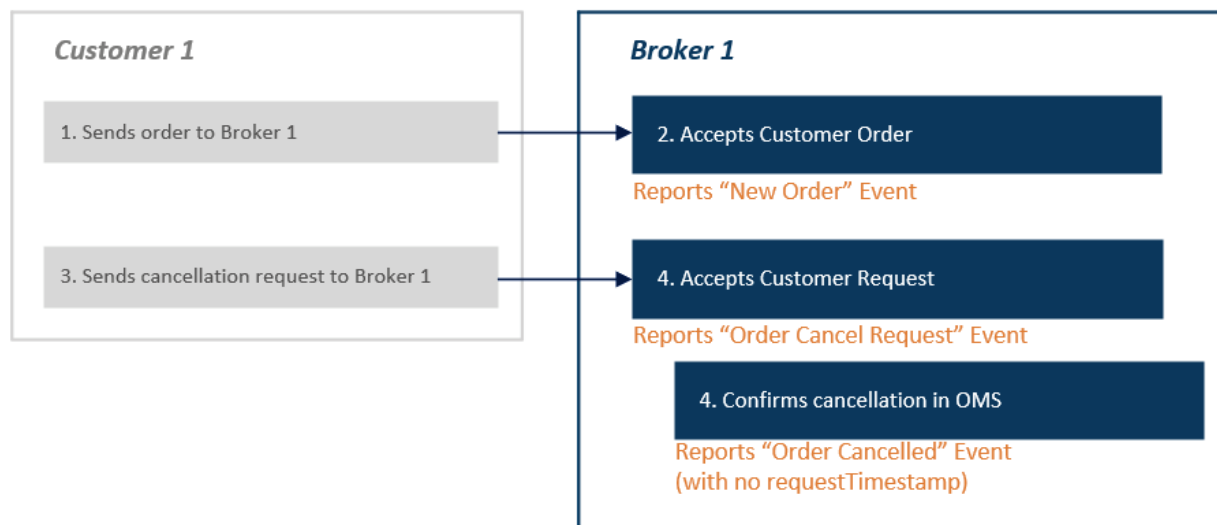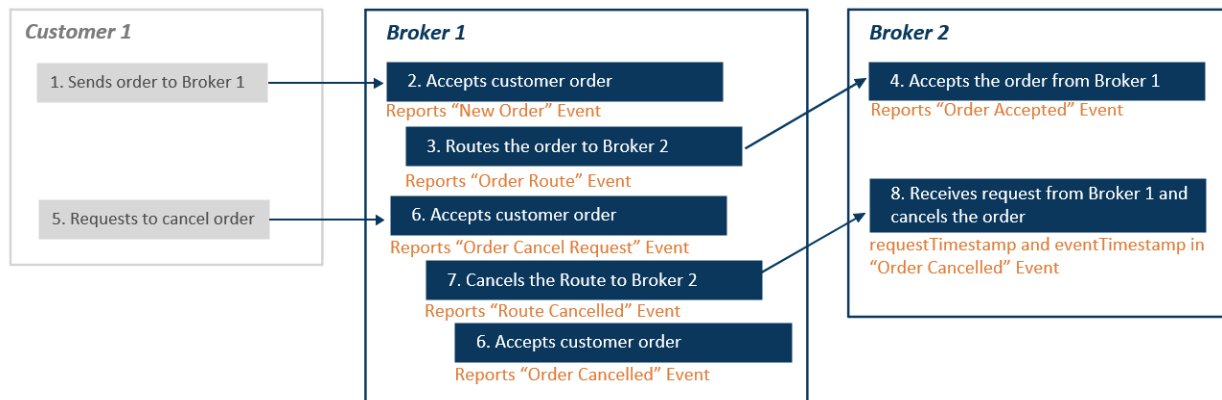
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The route of the customer order to Broker 2 (Order Route event)
- The customer cancellation request (Cancel Request event)
- The cancellation of the route to Broker 2 (Route Cancelled event)
- The confirmation of the cancellation (Order Cancelled event)

Industry Member Broker 2 is required to report:

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

- The receipt of the cancellation request from Broker 1 (*requestTimestamp* in Order Cancelled event)
- The cancellation of the order (*eventTimestamp* in Order Cancelled event)

Industry Members are required to capture the *eventTimestamp* in Order Cancelled events reflecting the time the order was cancelled (e.g., the time that the order was confirmed to be cancelled in the firm's OMS/EMS). In this example, the *eventTimestamp* for Broker 1 reflects the time that acknowledgement was received from Broker 2, and the *eventTimestamp* for Broker 2 reflects the time that the request was received from the customer. Industry Members are also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Cancelled/Modified event, or in a separate Order Cancel/Modification Request event. In this example, the request time is captured in the *requestTimestamp* field on the Order Modified events. In this example, Broker 1 reports a separate Order Cancelled and Order Cancel Request events, and Broker 2 reports an Order Cancelled event using the *requestTimestamp* field.

#	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 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***	

#	Step	Reported Event	Comments
		type: MEOR orderKeyDate: 20180417T000000 orderID: O56575 symbol: XYZ eventTimestamp: 20180417T150335.244456 manualFlag: false senderIMID: 123:FRMA destination: 456: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: 456:FRMB senderIMID: 123:FRMA senderType: F routedOrderID: RO56575XYZ affiliateFlag: false deptType: T side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Customer requests to cancel the order	*Broker 1 reports an **Order Cancel Request event***	

#	Step	Reported Event	Comments
		type: MEOCR orderKeyDate: 20180417T000000 orderID: O56575 symbol: XYZ eventTimestamp: 20180417T150336.223456 manualFlag: false cancelQty: 1000	
6	Broker 1 requests to cancel the order routed to broker 2, and confirms the cancellation	*Broker 1 reports a **Route Cancelled event*** type: MECR orderKeyDate: 20180417T000000 orderID: O56575 symbol: XYZ eventTimestamp: 20180417T150336.723456 manualFlag: false cancelQty: 1000 senderIMID: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: RO56575XYZ	The *eventTimestamp* in the Route Cancelled event is the time the cancellation of the route was confirmed.
7	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 requestTimestamp: 20180417T150336.423456	In this example, the *eventTimestamp* reflects the time that the request was received from Broker 1.
8	Broker 1 cancels the order per the customer's instruction	*Broker 1 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180417T000000 orderID: O56575	In this example, the *eventTimestamp* reflects the time that acknowledgement was received from Broker 2.

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180417T150336.723456 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.
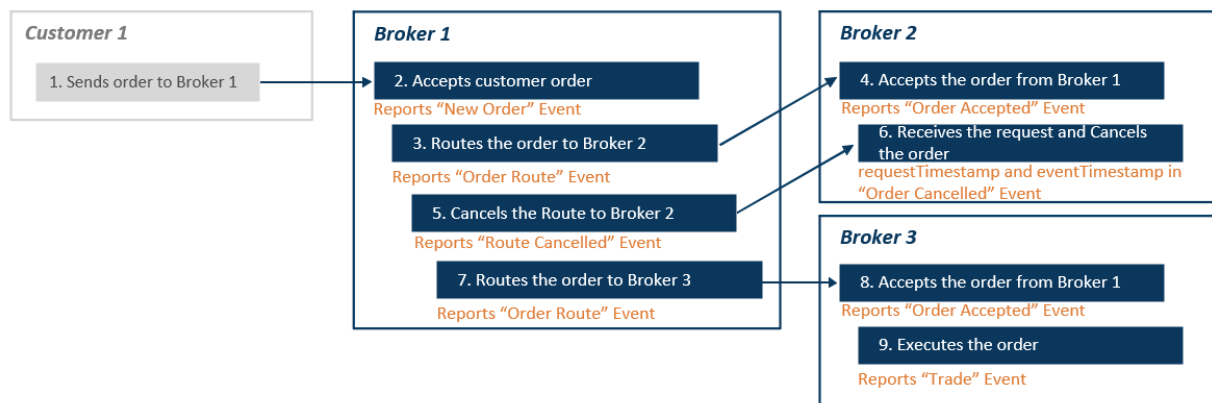
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The route of the customer order to Broker 2 (Order Route event)
- The cancellation of the route to Broker 2 (Route Cancelled 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 receipt of the cancellation request from Broker 1 (*requestTimestamp* in Order Cancelled event)
- The cancellation of Broker 1's order (*eventTimestamp* in 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)

In this scenario, 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 required to report the cancellation of the route that was sent to Broker 2 using a Route Cancelled event. 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. Industry Members are required to capture the *eventTimestamp* in Order Cancelled/Modified events reflecting the time the order was cancelled/modified (e.g., the time that the order was confirmed to be cancelled/modified in the firm's OMS/EMS). Industry Members are also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Cancelled/Modified event, or in a separate Order Cancel/Modification Request event. In this example, the *eventTimestamp* reflects the time that acknowledgement was received from the exchange. In this example, the request time is captured in the *requestTimestamp* field on the Order Modified events.

#	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	

#	Step	Reported Event	Comments
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: 123:FRMA destination: 456: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: 456:FRMB senderIMID: 123:FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG	

#	Step	Reported Event	Comments
		isoInd: NA custDspIntrFlag: false	
5	Broker 1 cancels the route to Broker 2	*Broker 1 reports a **Route Cancelled event*** type: MECR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.534456 manualFlag: false cancelQty: 1000 senderIMID: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: XYZO555 session:	
6	Broker 2 receives the request 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 requestTimestamp: 20180417T143036.334456	
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 manualFlag: false senderIMID: 123:FRMA destination: 987:FRMC	

#	Step	Reported Event	Comments
		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: 987:FRMC senderIMID: 123:FRMA senderType: F routedOrderID: XYZO560 affiliateFlag: false deptType: T 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 eventTimestamp: 20180417T143037.234456 manualFlag: false cancelFlag: false	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
		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.
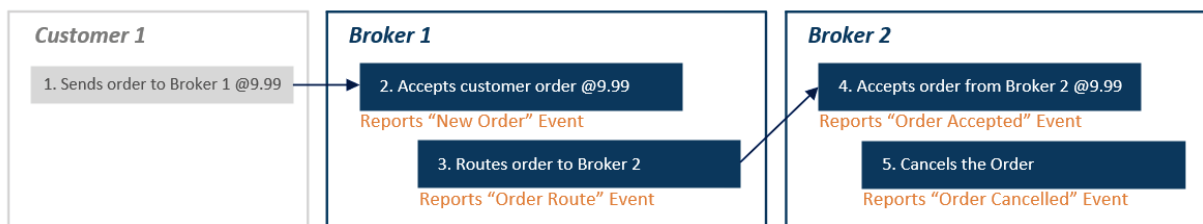
Industry Member Broker 1 is required to report:

- 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 a Route Cancelled event to CAT reflecting that the route was cancelled by Broker 2. Broker 1 is required to report any subsequent actions taken on the order as a result of the unsolicited cancellation by Broker 2, including if Broker 1 ultimately cancelled the order, or if Broker 1 routed the order to another destination.

Industry Members are required to capture the *eventTimestamp* in Order Cancelled events reflecting the time the order was cancelled (e.g., the time that the order was confirmed to be cancelled in the firm's OMS/EMS). In this example, the *eventTimestamp* reflects the time that Broker 2 cancelled the order on its books and records. Broker 2 is not required to report a receipt time, as the cancellation was not requested by Broker 1 and was initiated by the firm.

#	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	

#	Step	Reported Event	Comments
		manualFlag: false senderIMID: 123:FRMA destination: 456: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: 20180417T143036.234456 manualFlag: false receiverIMID: 456:FRMB senderIMID: 123: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	Broker 2 is not required to capture a request time, as the cancellation was not requested by Broker 1 and was initiated by the firm.

#	Step	Reported Event	Comments
		eventTimestamp: 20180417T143038.234456 manualFlag: false cancelQty: 1000 leavesQty: 0 initiator: F requestTimestamp:	
6	The route is cancelled on Broker 1's books and records	*N/A*	Since the order was cancelled by Broker 2, Broker 1 is not required to report a Route Cancelled event.

2.6.7. Customer Requests to Cancel an Order that has Already Been Fully Executed

This scenario illustrates the CAT reporting requirements when an Industry Member attempts to cancel an order that has already been fully 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 fully executed before the cancellation was initiated by the customer.
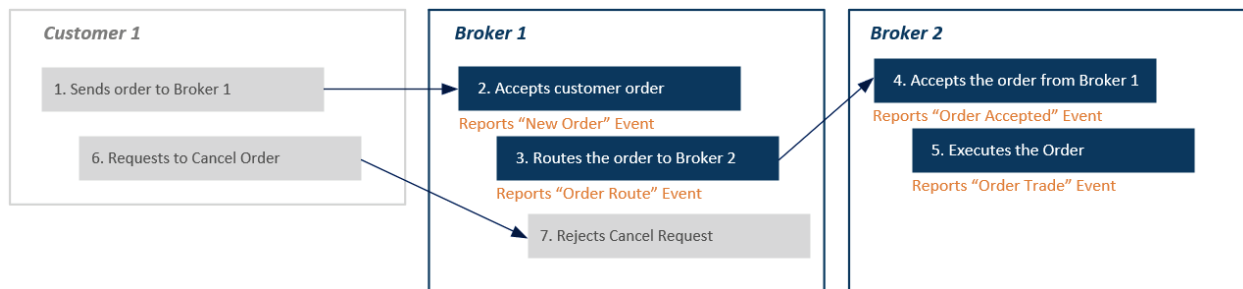
Industry Member Broker 1 is required to report:

- 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)

In accordance with CAT FAQ B42, Broker 1 is not required to report an Order Cancel Request event in Phase 2d, since the request was received after the order was fully executed and was terminal at Broker

1. However, this activity may be required in future phases of CAT. If Broker 1 chooses to optionally report an Order Cancel Request event, it will not be rejected by CAT in accordance with CAT FAQ P14.

#	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: 123:FRMA destination: 456: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: 20180417T143035.634456 manualFlag: false receiverIMID: 456:FRMB senderIMID: 123:FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: false deptType: T 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	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.

#	Step	Reported Event	Comments
		buyDetails: 　　orderKeyDate: 　　20180417T000000 　　orderID: O34567 　　side: B sellDetails: 　　side: SL 　　firmDesignatedID: PROP123 　　accountHolderType: P	
6	Customer instructs Broker 1 to cancel the order after the order has been executed	*NA*	
7	Broker 1 rejects the cancellation instruction from Customer	*NA*	Broker 1 is not required to report an Order Cancel Request event since the order has already been fully executed.

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.

Since the cancellation was initiated by the exchange, Broker 1 is not required to report a Route Cancelled event. 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.
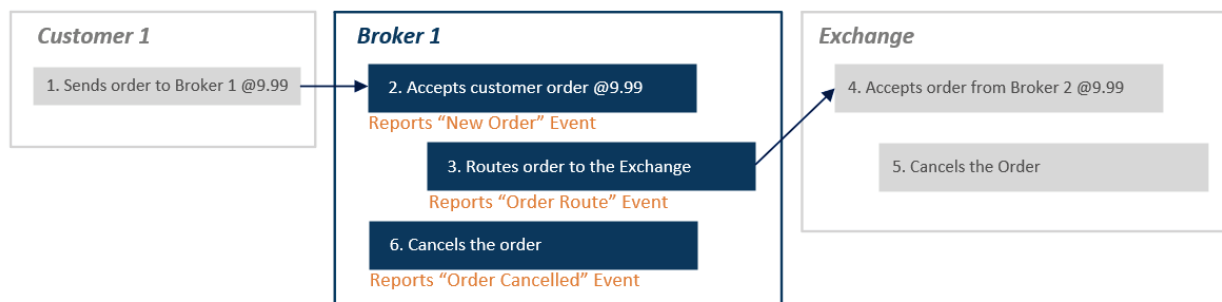
Industry Member Broker 1 is required to report:

- 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)

Industry Members are required to capture the *eventTimestamp* in Order Cancelled events reflecting the time the order was cancelled (e.g., the time that the order was confirmed to be cancelled in the firm's OMS/EMS). In this example, the *eventTimestamp* reflects the time that Broker 1 cancelled the order on its books and records after receiving the exchange cancellation. Broker 1 is not required to report a receipt time, as the cancellation was not requested by the customer.

#	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	

#	Step	Reported Event	Comments
		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: 123: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:	
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	The route is cancelled on Broker 1's books and records	*N/A*	Since the cancellation was initiated by the exchange, Broker 1 is not required to report a Route Cancelled event.
7	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".

#	Step	Reported Event	Comments
		requestTimestamp:	

Option 2:

Upon cancellation by the exchange, Broker 1 routes the order to another venue.
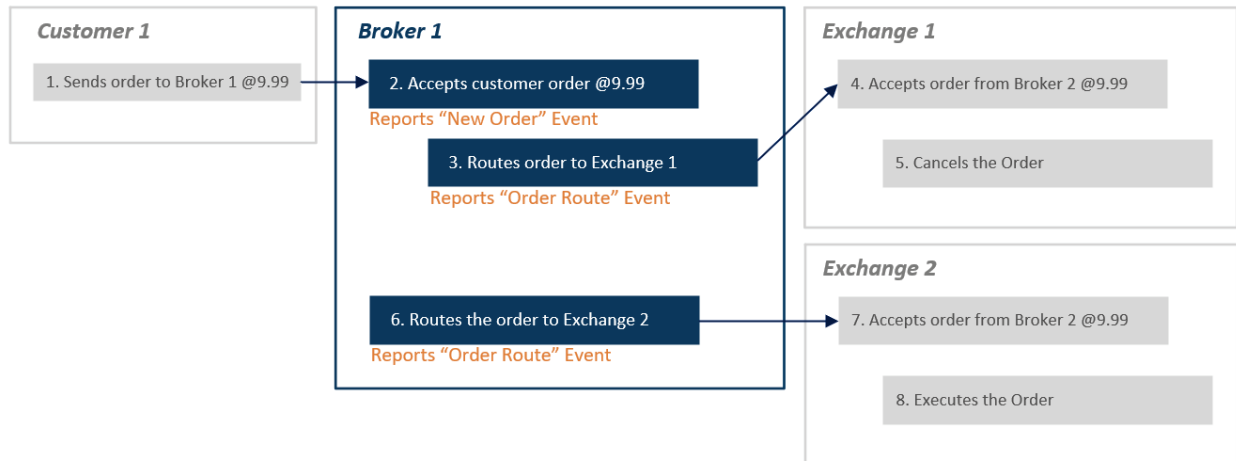
Industry Member Broker 1 is required to report:

- 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)

Industry Members are required to capture the *eventTimestamp* in Order Modified events reflecting the time the order was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). In this example, the *eventTimestamp* reflects the time that Broker 1 modified the order on its books and records after receiving the exchange cancellation. Broker 1 is not required to report a receipt time, as the modification was not requested by the customer.

#	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	

| #	Step	Reported Event	Comments
		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: 123: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:	
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***	

#	Step	Reported Event	Comments
6	The route is cancelled on Broker 1's books and records	*N/A*	Since the cancellation was initiated by the exchange, Broker 1 is not required to report a Route Cancelled event.
7	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: 123: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:	
8	Exch 2 accepts the order from Broker 1	*Exch 2 reports a Participant **Order Accepted event***	
9	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 eventTimestamp: 20170801T143031.123456 manualFlag: false deptType: A side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG custDspIntrFlag: false	

#	Step	Reported Event	Comments
		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: 123:FRMA destination: 456: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 eventTimestamp: 20170801T143032.523456 manualFlag: false receiverIMID: 456:ATSA senderIMID: 123:FRMA senderType: F routedOrderID: ABCDXYZ555 affiliateFlag: false deptType: ATS side: B price: 10.01 quantity: 300	

#	Step	Reported Event	Comments
		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 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	

#	Step	Reported Event	Comments
		orderID: O555 symbol: XYZ eventTimestamp: 20170801T143032.123456 manualFlag: false senderIMID: 789:FRMB destination: 456: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: 456:ATSA senderIMID: 789:FRMB senderType: F routedOrderID: ABCDXYZ556 affiliateFlag: false deptType: ATS side: SL price: 10.01 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	

#	Step	Reported Event	Comments
		nboPrice: 10.03 nbboSource: S nbboTimestamp: 20170801T143032.523456	
9	ATS A performs the cross, and the orders are executed.	*ATS A reports a **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 nbboSource: S nbboTimestamp: 20170801T143033.523456	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.

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	

#	Step	Reported Event	Comments
		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 price: 10.00 quantity: 300 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS567	

#	Step	Reported Event	Comments
		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 workingPrice: 10.00 displayQty: 0 atsOrderType: P1 nbbPrice: 10.00 nboPrice: 10.03 nbboSource: S	

#	Step	Reported Event	Comments
		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 senderIMID: 123:BRKA destination: 456:ATSA destinationType: F routedOrderID: ATSAXYZ8000 side: SL price: 10.00 quantity: 1200 orderType: LMT timeInForce: DAY=20180416 tradingSession: REG affiliateFlag: false	

#	Step	Reported Event	Comments
		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: 456:ATSA senderIMID: 123: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	
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:	Since there was only one order on the sell side, ATSA would only populate the *sellDetails* in its MEOT. A separate MEOTS will be reported for every order related to the buy side of the trade.

#	Step	Reported Event	Comments
		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	
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: 500multiLegInd: false	In this example, the *multiLegInd* field is populated with a value of 'false' as the event is not associated with a Multi-Leg order.
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	

#	Step	Reported Event	Comments
		side: B quantity: 300 multiLegInd: false	
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 multiLegInd: false	

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.
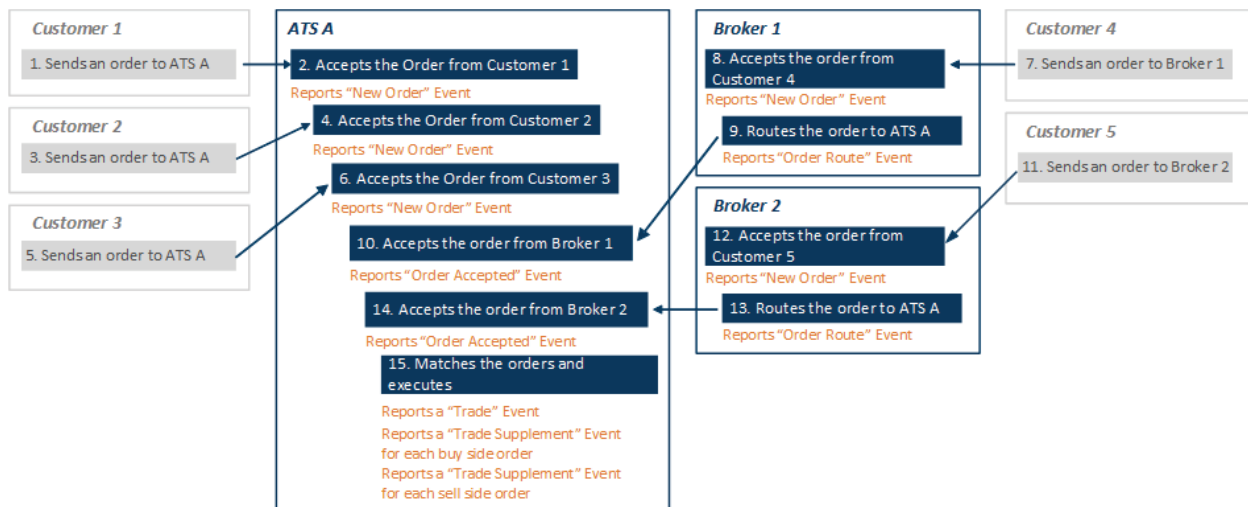
Industry Member Broker 1 is required to report:

- 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: 123:BRKA destination: 456: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: 456:ATSA senderIMID: 123: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: 789:BRKB destination: 456: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: 456:ATSA senderIMID: 789: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 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 multiLegInd: false	In this example, the *multiLegInd* field is populated with a value of 'false' as the event is not associated with a Multi-Leg order.
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 multiLegInd: false	
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 multiLegInd: false	
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 quantity: 1000 multiLegInd: false	
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 quantity: 200 multiLegInd: false	

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.
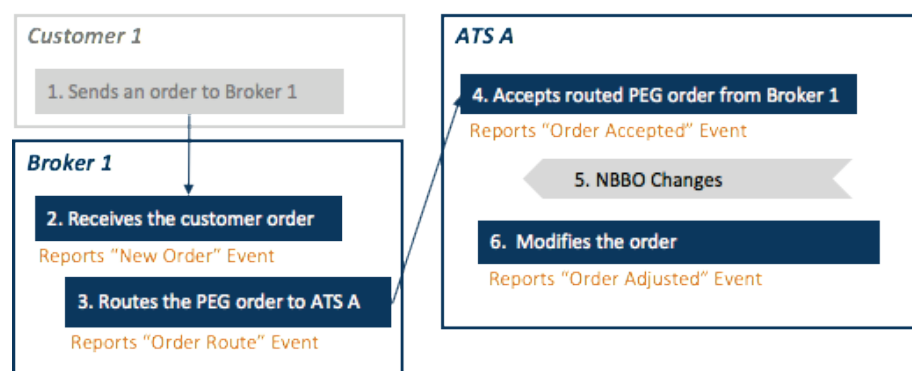
Industry Member Broker 1 is required to report:

- 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: 123:BRK1 destination: 456:ATSA destinationType: F routedOrderID: S12O12345 side: Buy price: 10.10 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: M	Broker 1 is 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: 456:ATSA senderIMID: 123: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. The initiator flag is populated with a value of 'F', as the firm modified the order based on an implicit customer instruction. Refer to CAT FAQ B63 for additional information.

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.
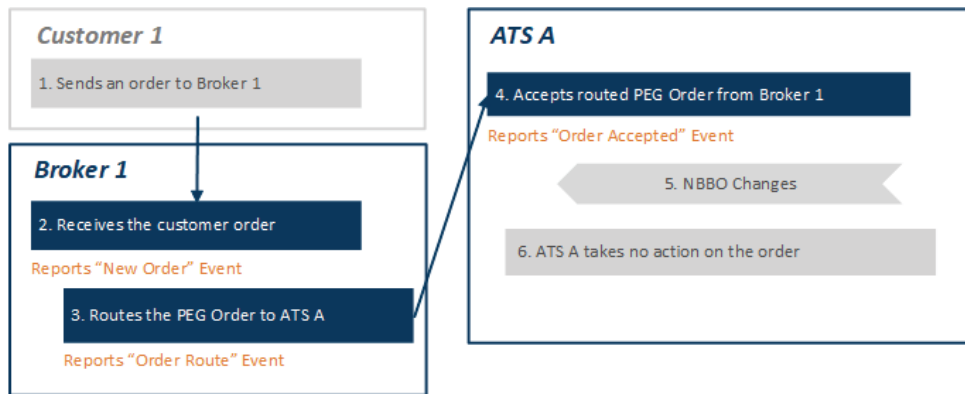
Industry Member Broker 1 is required to report:

- 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: 123:BRK1 destination: 456:ATSA destinationType: F routedOrderID: S12O12345 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: M	BRK1 is 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: 456:ATSA senderIMID: 123: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: 123:BRK1 destination: 456:ATSA destinationType: F routedOrderID: S12O12345 side: B price: 10.10 quantity: 500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: M	BRK1 is 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: 456:ATSA senderIMID: 123: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: 9.85 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: SL 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: 789:BRK2 destination: 456:ATSA destinationType: F routedOrderID: S12O12346 side: SL 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: 456:ATSA senderIMID: 789:BRK2 senderType: F routedOrderID: S12O12346 affiliateFlag: false deptType: ATS side: SL 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.
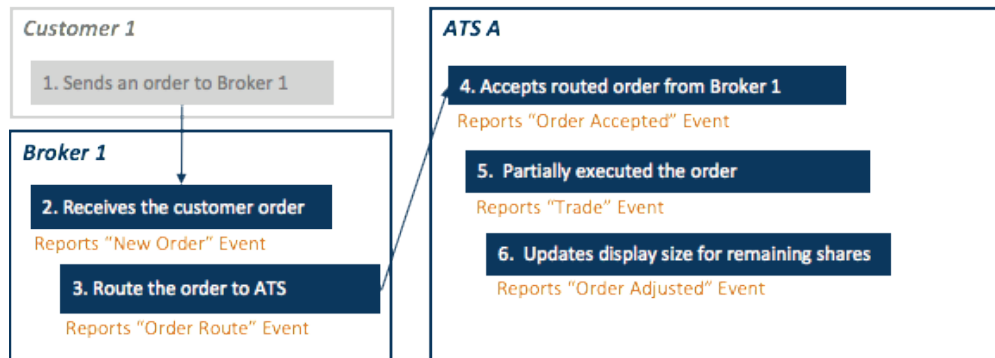
Industry Member Broker 1 is required to report:

- 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: 123:BRKR1 destination: 456: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: RSV|DISQ=1000	Broker 1 is 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: 456:ATSA senderIMID: 123: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:	

#	Step	Reported Event	Comments
		quantity: 800 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 over the Phone

This scenario illustrates the CAT reporting requirements when a Market Maker executes an order as the result of a negotiation with another Industry Member over the phone. In this scenario, 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:

- 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:

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

#	Step	Reported Event	Comments
1	Trade is negotiated between Market Maker 1 and Broker 2	*NA*	

#	Step	Reported Event	Comments
2	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: true 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	
3	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: O 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).

#	Step	Reported Event	Comments
		side: B	
4	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: true 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	
5	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	The *sideDetailsInd* must be marked as SELL. Side details are not required for the contra-side (buy side).

#	Step	Reported Event	Comments
		orderID: O12346 side: SL	

2.8.2. Trade Executed as a Result of an OTC Link ATS Message

This scenario illustrates the CAT reporting requirements when a Market Maker (IMID:MMA) executes an order after receiving an OTC Link Message from another Industry Member (IMID:BRKB).

In this scenario, Market Maker 1 is quoting symbol XYZ on OTC Link ATS to buy 1,000 shares at 1.15. OTC Link ATS subscriber and Industry Member Broker 2 sends an OTC Link ATS message electronically (i.e. via FIX) to Market Maker 1 indicating that the price is not negotiable. Market Maker 1 and executes the trade (3,000 shares at 1.14), and reports the trade to the ORF.

For the quote sent to OTC Link ATS:

- Market Maker 1 is required to report the following:
  - The origination of the quote (New Quote event)
  - The route of the quote to OTC Link ATS (Routed Quote event)
- OTC Link ATS is required to report the following:
  - Receipt of the quote from Market Maker 1 (Quote Received event)

For the order sent from Broker 2 to Market Maker 1 via OTC Link ATS based on the posted quote:
- Broker 2 is required to report the following:
  - The origination of a new proprietary order to sell 3,000 shares @1.15 (New Order event)

- ◆ The route of the order to Market Maker 1 via OTC Link ATS (Order Route event to OTC Link ATS with *handlingInstructions* value 'DLVT:MMA' and 'NCTR')
- OTC Link ATS is required to report the following:
  - ◆ The receipt of the order from Broker 2 (Order Accepted event with a *handlingInstructions* value of 'DLVT:MMA' and 'NCTR')
  - ◆ The route of the order to Market Maker 1 (Order Route event with a *handlingInstructions* value of 'DLVF:BRKB' and 'NCTR', and a *quoteID* linking to the related MEQR event)
- Market Maker 1 is required to report the following:
  - ◆ The order received from Broker 2 via OTC Link ATS (Order Accepted event from OTC Link ATS with *handlingInstructions* value 'DLVF:BRKB' and 'NCTR')
  - ◆ The execution of the order from the firm's prop account (Trade event linking to the ORF report)

On Order Route events to OTC Link ATS, along with the corresponding Order Accepted event received by OTC Link ATS, a *handlingInstructions* value of 'DLVT' must be populated indicating the IMID of the party the route is being delivered to. On Order Accepted events received from OTC Link ATS, along with the corresponding Order Route event sent by OTC Link ATS, a *handlingInstructions* value of 'DLVF' must be populated indicating the IMID of the party the route is being delivered from. Orders where the price is not negotiable must be marked with a *handlingInstructions* value of 'NCTR'.

If a route is sent from an Industry Member to a quote posted by a market maker, OTC Link ATS must populate the *quoteID* of the related Quote Received event in its Order Route event. The *quoteID* is not required to be populated on events representing counter messages that were not directed to a posted quote.

#	Step	Reported Event	Comments
1	Market Maker 1 originates a new quote and sends the quote to OTC Link ATS	*Market Maker 1 (IMID = MMA) reports a **New Quote event (1/2)** type: MENQ quoteKeyDate: 20180501T000000 quoteID: NQ6789 symbol: XYZ eventTimestamp: 20180501T153035.234456 onlyOneQuoteFlag: true bidPrice: 1.15 bidQty: 1000 firmDesignatedID: MM999 accountHolderType: O *Market Maker 1 (IMID = MMA) reports a **Routed Quote event (2/2)***	Market Maker 1 is required to link the Routed Quote event to the Quote Received event reported by OTC Link ATS via the *routedQuoteID* field.

#	Step	Reported Event	Comments
		type: MERQ quoteKeyDate: 20180501T000000 quoteID: NQ6789 symbol: XYZ eventTimestamp: 20180501T153035.234456 senderIMID: 456:MMA destination: CRD:IMID routedQuoteID: RQID12345 bidPrice: 1.15 bidQty: 1000	
2	OTC Link ATS receives the quote from Market Maker 1	*OTC Link ATS reports a **Quote Received event*** type: MEQR quoteKeyDate: 20180501T000000 quoteID: Q6789 symbol: XYZ receivedQuoteID: RQID12345 eventTimestamp: 20180501T153035.234456 receiverIMID: CRD:IMID senderIMID: 456:MMA onlyOneQuoteFlag: false bidPrice: 1.15 bidQty: 1000	OTC Link ATS is required to link the Quote Received event to the Routed Quote event reported by Market Maker 1 via the *receivedQuoteID* field.
3	Broker 2 originates a 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	

#	Step	Reported Event	Comments
		affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
4	Broker 2 routes order to Market Maker 1 via OTC Link ATS	*Broker 2 (IMID = BRKB) reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: 987:BRKB destination: CRD:IMID destinationType: F routedOrderID: XYZ012321 side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: NCTR|DLVT:MMA	The Order Route event reported by Broker 2 must contain a *handlingInstructions* value of DLVT:MMA indicating that the order is to be delivered to Market Maker 1. The Order Route event must also contain a *handlingInstructions* value of NCTR indicating that the price is not negotiable.
5	OTC Link ATS receives the message from Broker 2	*OTC Link ATS reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: CRD:IMID senderIMID: 987:BRKB senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: ATS side: SL price: 1.14	The Order Accepted event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVT:MMA' indicating that the order is to be delivered to Market Maker 1. The Order Accepted event must also contain a *handlingInstructions* value of NCTR indicating that the price is not negotiable.

#	Step	Reported Event	Comments
		quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: NCTR|DLVT:MMA isoInd: NA custDspIntrFlag: false	
6	OTC Link delivers the message to Market Maker 1	*OTC Link ATS reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: CRD:IMID destination: 789:MMA destinationType: F routedOrderID: XYZ012321 side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: NCTR|DLVF:BRKB quoteKeyDate: 20180501T000000 quoteID: Q6789	The Order Route event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVF:BRKB' indicating that the order was delivered from Broker 2. The Order Route event must also contain a *handlingInstructions* value of NCTR indicating that the price is not negotiable. OTC Link ATS must also populate the *quoteID* linking to the related Quote Received event. The Order Route event will contain three separate and distinct linkages, including: • Intrafirm linkage between OTC Link ATS's Order Accepted and Order Route event • Intrafirm linkage between OTC Link ATS's Order Route event and Quote Received event • Interfirm Linkage between OTC Link ATS's Order Route event and the Market Maker's Order Accepted event
7	Market Maker 1 receives the order	*Market Maker (IMID = MMA) reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O87654 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: 789:MMA senderIMID: CRD:IMID	The Order Accepted event reported by the Market Maker must contain a *handlingInstructions* value of 'DLVF:BRKB' indicating that the order was delivered from Broker 2. The Order Accepted event must also contain a *handlingInstructions* value of NCTR indicating that the price is not negotiable.

#	Step	Reported Event	Comments
		senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: T side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: NCTR|DLVF:BRKB isoInd: NA custDspIntrFlag: false	
8	Market Maker 1 executes the order	*Market Maker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp: 20180501T153039.834456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 3000 price: 1.14 capacity: P tapeTradeID: ORF1234 marketCenterID: O sideDetailsInd: N/A buyDetails: side: B firmDesignatedID: PROP2 accountHolderType: P sellDetails: orderKeyDate: 20180501T000000 orderID: O87654 side: SL	Market Maker reports a Trade event reflecting that the order was executed out of the firm's prop account.

2.8.3. Trade Executed as a Result of an OTC Link ATS Counter Message

This scenario illustrates the CAT reporting requirements when an Industry Member executes an order after receiving an OTC Link Counter Message from another Industry Member.

In this scenario, Market Maker 1 (IMID:MMA) is quoting symbol XYZ on OTC Link ATS to buy 1,000 shares at 1.15. OTC Link ATS subscriber and Industry Member Broker 2 (IMID:BRKB) sends an OTC Link ATS message electronically (i.e. via FIX) to Market Maker 1 indicating that the price is negotiable. 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.

Market Maker 1

1. Originates Quote
Reports "New Quote" Event

2. Routes Quote to OTC Link ATS
Reports "Routed Quote" Event

OTC Link ATS

3. Receives Quote from Market Maker
Reports "Quote Received" Event

Broker 2

4. Originates new proprietary order
Reports "New Order" Event

5. Routes order to Market Maker 1 via OTC Link ATS
Reports "Order Route" Event

OTC Link ATS

6. Receives message from Broker 2
Reports "Order Accepted" Event

7. Sends message to the Market Maker
Reports "Order Route" Event

Market Maker 1

8. Receives order from Broker 2 via OTC Link ATS
Reports "Order Accepted " Event

9. Declines the order
Reports "Order Cancelled" Event

Market Maker 1

10. Originates new proprietary order
Reports "New Order" Event

11. Routes order to Broker 2 via OTC Link ATS
Reports "Order Route" Event

OTC Link ATS

12. Receives message from Market Maker 1
Reports "Order Accepted" Event

13. Sends message to Broker 2
Reports "Order Route" Event

Broker 2

14. Receives order from Market Maker 1 via OTC Link ATS
Reports "Order Accepted " Event

15. Executes the order
Reports "Trade" Event

For the quote sent to OTC Link ATS:

- Market Maker 1 is required to report the following:
  - The origination of the quote (New Quote event)
  - The route of the quote to OTC Link ATS (Routed Quote event)
- OTC Link ATS is required to report the following:
  - Receipt of the quote from Market Maker 1 (Quote Received event)

For the order sent from Broker 2 to Market Maker 1 via OTC Link ATS based on the posted quote:
- Broker 2 is required to report the following:
  - The origination of a new proprietary order to sell 3,000 shares @1.15 (New Order event)

- The route of the order to Market Maker 1 via OTC Link ATS (Order Route event to OTC Link ATS with *handlingInstructions* value 'DLVT:MMA')
- OTC Link ATS is required to report the following:
    - The receipt of the order from Broker 2 (Order Accepted event with a *handlingInstructions* value of 'DLVT:MMA')
    - The route of the order to Market Maker 1 (Order Route event with a *handlingInstructions* value of 'DLVF:BRKB', and a *quoteID* linking to the related MEQR event)
- Market Maker 1 is required to report the following:
    - The order received from Broker 2 via OTC Link ATS (Order Accepted event from OTC Link ATS with *handlingInstructions* value 'DLVF:BRKB')
    - The decline of the message received from Broker 2 (Order Cancelled event)

For the counter sent from Market Maker 1 to Broker 2 via OTC Link ATS:

- Market Maker 1 is required to report the following:

    - The origination of a new proprietary order to sell 3,000 shares @ 1.14 (New Order event with *handlingInstructions* value 'CTR')
    - The route of the order to Broker 2 via OTC Link ATS (Order Route event to OTC Link ATS with *handlingInstructions* value 'DLVT:BRKB' and 'CTR')
- OTC Link ATS is required to report the following:
    - The receipt of the order from Market Maker 1 (Order Accepted event with a *handlingInstructions* value of 'DLVT:BRKB' and 'CTR')
    - The route of the order to Broker 2 (Order Route event with a *handlingInstructions* value of 'DLVF:MMA' and 'CTR')
- Broker 2 is required to report the following:
    - The receipt of the order via OTC Link ATS (Order Accepted event from OTC Link ATS with *handlingInstructions* values 'DLVF:MMA' and 'CTR')
    - The execution of the order from the firm's prop account (Trade event linking to the ORF report)

On Order Route events to OTC Link ATS, along with the corresponding Order Accepted event received by OTC Link ATS, a *handlingInstructions* value of 'DLVT' must be populated indicating the IMID of the party the route is being delivered to. On Order Accepted events received from OTC Link ATS, along with the corresponding Order Route event sent by OTC Link ATS, a *handlingInstructions* value of 'DLVF' must be populated indicating the IMID of the party the route is being delivered from.

Messages that are received and declined by an Industry Member must be captured as an Order Cancelled event. If no action is taken on the message, or the message if received and left to expire, an Order Cancelled event is not required.

Orders that are originated and routed via OTC Link ATS as a counter message must contain a *handlingInstructions* value of 'CTR', along with the related Order Accepted and Order Route event reported by OTC Link ATS, and the Order Accepted event by the Industry Member receiving the counter message.

If a route is sent from an Industry Member to a quote posted by a market maker, OTC Link ATS must populate the *quoteID* of the related Quote Received event in its Order Route event. The *quoteID* is not required to be populated on events representing counter messages that were not directed to a posted quote.

#	Step	Reported Event	Comments
1	Market Maker 1 originates a new quote and sends the quote to OTC Link ATS	*Market Maker 1 (IMID = MMA) reports a* **New Quote event (1/2)** type: MENQ quoteKeyDate: 20180501T000000 quoteID: NQ6789 symbol: XYZ eventTimestamp: 20180501T153035.234456 onlyOneQuoteFlag: true bidPrice: 1.15 bidQty: 1000 firmDesignatedID: MM999 accountHolderType: O *Market Maker 1 (IMID = MMA) reports a* **Routed Quote event (2/2)** type: MERQ quoteKeyDate: 20180501T000000 quoteID: NQ6789 symbol: XYZ eventTimestamp: 20180501T153035.234456 senderIMID: 456:MMA destination: CRD:IMID routedQuoteID: RQID12345 bidPrice: 1.15 bidQty: 1000	Market Maker 1 is required to link the Routed Quote event to the Quote Received event reported by OTC Link ATS via the *routedQuoteID* field.

#	Step	Reported Event	Comments
2	OTC Link ATS receives the quote from Market Maker 1	*OTC Link ATS reports a **Quote Received event*** type: MEQR quoteKeyDate: 20180501T000000 quoteID: Q6789 symbol: XYZ receivedQuoteID: RQID12345 eventTimestamp: 20180501T153035.234456 receiverIMID: CRD:IMID senderIMID: 456:MMA onlyOneQuoteFlag: false bidPrice: 1.15 bidQty: 1000	OTC Link ATS is required to link the Quote Received event to the Routed Quote event reported by Market Maker 1 via the *receivedQuoteID* field.
3	Broker 2 originates a 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: false representativeInd: N	
4	Broker 2 routes order to Market Maker 1 via OTC Link ATS	*Broker 2 (IMID = BRKB) reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp:	The Order Route event reported by Broker 2 must contain a *handlingInstructions* value of DLVT:MMA indicating that the order is to be delivered to Market Maker 1.

#	Step	Reported Event	Comments
		20180501T153039.234456 manualFlag: false senderIMID: 987:BRKB destination: CRD:IMID destinationType: F routedOrderID: XYZ012321 side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: DLVT:MMA	
5	OTC Link ATS receives the message from Broker 2	*OTC Link ATS reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: CRD:IMID senderIMID: 987:BRKB senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: ATS side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DLVT:MMA isoInd: NA custDspIntrFlag: false	The Order Accepted event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVT:MMA' indicating that the order is to be delivered to Market Maker 1.
6	OTC Link delivers the message to Market Maker 1	*OTC Link ATS reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765	The Order Route event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVF:BRKB' indicating that the order was delivered from Broker 2 OTC Link ATS must also populate the

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: CRD:IMID destination: 789:MMA destinationType: F routedOrderID: XYZ012321 side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: DLVF:BRKB quoteKeyDate: 20180501T000000 quoteID: Q6789	*quoteID* linking to the related Quote Received event. The Order Route event will contain three separate and distinct linkages, including: • Intrafirm linkage between OTC Link ATS's Order Accepted and Order Route event • Intrafirm linkage between OTC Link ATS's Order Route event and Quote Received event • Interfirm Linkage between OTC Link ATS's Order Route event and the Market Maker's Order Accepted event
7	Market Maker 1 receives the order	*Market Maker (IMID = MMA) reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O87654 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: 789:MMA senderIMID: CRD:IMID senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: T side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DLVF:BRKB isoInd: NA custDspIntrFlag: false	The Order Accepted event reported by the Market Maker must contain a *handlingInstructions* value of 'DLVF:BRKB' indicating that the order was delivered from Broker 2
8	Market Maker 1 declines the order	*Market Maker 1 reports an **Order Cancelled event***	

#	Step	Reported Event	Comments
		type: MEOC orderKeyDate: 20180424T000000 orderID: O87654 symbol: XYZ eventTimestamp: 20180501T153039.834456 manualFlag: false cancelQty: 3000 leavesQty: 0 initiator: F	
9	Market Maker 1 generates a new proprietary order as a counter message	*Market Maker 1 (IMID = MMA) reports a* **New Order event** type: MENO orderKeyDate: 20180501T000000 orderID: O12121 symbol: XYZ eventTimestamp: 20180501T153040.234456 manualFlag: false deptType: T side: B price: 1.15 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: CTR custDspIntrFlag: false firmDesignatedID: MM999 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Market Maker 1 must populate a *handlingInstructions* value of 'CTR' on its New Order event to indicate that the order was originated as a counter message.
10	Market Maker 1 routes the order to Broker 2 via OTC Link ATS	*Market Maker (IMID: MMA) reports an* **Order Route event** type: MEOR orderKeyDate: 20180501T000000 orderID: O12121 symbol: XYZ eventTimestamp: 20180501T153040.234456 manualFlag: false senderIMID: 789:MMA	The Order Route event reported by the Market Maker must contain a *handlingInstructions* value of 'DLVT:BRKB' indicating that the order is to be delivered to Broker 2. The Order Route event must also contain a *handlingInstructions* value of 'CTR' indicating that the route was sent as a counter message.

#	Step	Reported Event	Comments
		destination: CRD:IMID destinationType: F routedOrderID: XYZ012345 side: B price: 1.15 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: CTR|DLVT:BRKB	
11	OTC Link ATS receives the message from Market Maker 1	*OTC Link ATS reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O98989 symbol: XYZ eventTimestamp: 20180501T153040.234456 manualFlag: false receiverIMID: CRD:IMID senderIMID: 789:MMA senderType: F routedOrderID: XYZ012345 affiliateFlag: false deptType: ATS side: B price: 1.15 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: CTR|DLVT:BRKB isoInd: NA custDspIntrFlag: false	The Order Accepted event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVT:BRKB' indicating that the order is to be delivered to Broker B. The Order Accepted event must also contain a *handlingInstructions* value of 'CTR' to indicate that the order was received as a counter message.
12	OTC Link delivers the message to the Broker 2	*OTC Link ATS reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ	The Order Route event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVF:MMA' indicating that the order was delivered from the Market Maker. The Order Route event must also contain a *handlingInstructions* value of 'CTR' to indicate that the order was

#	Step	Reported Event	Comments
		eventTimestamp: 20180501T153040.234456 manualFlag: false senderIMID: CRD:IMID destination: 987:BRKB destinationType: F routedOrderID: XYZ012345 side: B price: 1.15 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: CTR|DLVF:MMA	sent as a counter message.
13	Broker 2 receives the order	*Broker 2 (IMID = BRKB) reports an* ***Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O67654 symbol: XYZ eventTimestamp: 20180501T153040.234456 manualFlag: false receiverIMID: 987:BRKB senderIMID: CRD:IMID senderType: F routedOrderID: XYZ012345 affiliateFlag: false deptType: T side: B price: 1.15 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: CTR|DLVF:MMA isoInd: NA custDspIntrFlag: false	The Order Accepted event reported by Broker 2 must contain a *handlingInstructions* value of 'DLVF:MMA' indicating that the order was delivered from the Market Maker. The Order Accepted event must also contain a *handlingInstructions* value of 'CTR' to indicate that the order was received as a counter message.
14	Broker 2 executes the order	*Broker 2 (IMID = BRKB) reports a* ***Trade event***	Broker 2 reports a Trade event reflecting that the order was executed out of the firm's prop account.

#	Step	Reported Event	Comments
		type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp: 20180501T153040.834456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 3000 price: 1.15 capacity: P tapeTradeID: ORF1234 marketCenterID: O sideDetailsInd: NA buyDetails: orderKeyDate: 20180501T000000 orderID: O67654 side: B sellDetails: side: SL firmDesignatedID: PROP2 accountHolderType: P	

2.8.4. Customer Order Executed as a Result of an OTC Link ATS Message

This scenario illustrates the CAT reporting requirements when a Market Maker (IMID:MMA) receives a customer order then submits an unsolicited displayed (bid) quote to OTC Link Message, and the order is executed as a result of an OTC Link Message received from another Broker-Dealer (IMID:BRKB).

In this scenario, Market Maker 1 receives a customer order and submits an unsolicited displayed quote in symbol XYZ on OTC Link ATS to buy 1,000 shares at 1.15 based on the customer order. OTC Link ATS subscriber and Industry Member Broker 2 sends an OTC Link ATS message electronically (i.e. via FIX) to trade at the quoted price. Market Maker 1 executes the trade and reports the trade to the ORF.

For the quote sent to OTC Link ATS:

- Market Maker 1 is required to report the following:
  - The origination of the quote (New Quote event)
  - The route of the quote to OTC Link ATS (Routed Quote event)
- OTC Link ATS is required to report the following:
  - Receipt of the quote from Market Maker 1 (Quote Received event)

For the customer order and the order sent from Broker 2 to Market Maker 1 via OTC Link ATS based on the posted quote:

- Broker 2 is required to report the following:
  - The origination of a new proprietary order to sell 3,000 shares @1.15 (New Order event)
  - The route of the order to Market Maker 1 via OTC Link ATS (Order Route event to OTC Link ATS with *handlingInstructions* value 'DLVT:MMA')
- OTC Link ATS is required to report the following:
  - The receipt of the order from Broker 2 (Order Accepted event with a *handlingInstructions* value of 'DLVT:MMA')
  - The route of the order to Market Maker 1 (Order Route event with a *handlingInstructions* value of 'DLVF:BRKB', and a *quoteID* linking to the related MEQR event)
- Market Maker 1 is required to report the following:
  - The receipt of the customer order (New Order event)
  - The order received from Broker 2 via OTC Link ATS (Order Accepted event from OTC Link ATS with *handlingInstructions* value 'DLVF:BRKB')
  - The execution of the customer order against the order from Broker 2 (Trade event linking to the ORF report)

On Order Route events to OTC Link ATS, along with the corresponding Order Accepted event received by OTC Link ATS, a *handlingInstructions* value of 'DLVT' must be populated indicating the IMID of the party the route is being delivered to. On Order Accepted events received from OTC Link ATS, along with the corresponding Order Route event sent by OTC Link ATS, a *handlingInstructions* value of 'DLVF' must be populated indicating the IMID of the party the route is being delivered from.

If a route is sent from an Industry Member to a quote posted by a market maker, OTC Link ATS must populate the *quoteID* of the related Quote Received event in its Order Route event. The *quoteID* is not required to be populated on events representing counter messages that were not directed to a posted quote.

#	Step	Reported Event	Comments
1	Market Maker 1 receives a customer order	*Market Maker 1 (IMID = MMA) reports a* **New Order event** type: MENO orderKeyDate: 20180501T000000 orderID: C45678 symbol: XYZ eventTimestamp: 20180501T153034.234456 manualFlag: false deptType: A side: B price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUS555 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Market Maker 1 originates a new quote and sends the quote to OTC Link ATS	*Market Maker 1 (IMID = MMA) reports a* **New Quote event (1/2)** type: MENQ quoteKeyDate: 20180501T000000 quoteID: NQ6789 symbol: XYZ eventTimestamp: 20180501T153035.234456 onlyOneQuoteFlag: true bidPrice: 1.15	Market Maker 1 is required to link the Routed Quote event to the Quote Received event reported by OTC Link ATS via the *routedQuoteID* field.

#	Step	Reported Event	Comments
		bidQty: 1000 firmDesignatedID: MM999 accountHolderType: O *Market Maker 1 (IMID = MMA)* *reports a* **Routed Quote event (2/2)** type: MERQ quoteKeyDate: 20180501T000000 quoteID: NQ6789 symbol: XYZ eventTimestamp: 20180501T153035.234456 senderIMID: 456:MMA destination: CRD:IMID routedQuoteID: RQID12345 bidPrice: 1.15 bidQty: 1000	
3	OTC Link ATS receives the quote from Market Maker 1	*OTC Link ATS reports a* **Quote Received event** type: MEQR quoteKeyDate: 20180501T000000 quoteID: Q6789 symbol: XYZ receivedQuoteID: RQID12345 eventTimestamp: 20180501T153035.234456 receiverIMID: CRD:IMID senderIMID: 456:MMA onlyOneQuoteFlag: false bidPrice: 1.15 bidQty: 1000	OTC Link ATS is required to link the Quote Received event to the Routed Quote event reported by Market Maker 1 via the *receivedQuoteID* field.
4	Broker 2 originates a 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: 1.15 quantity: 1000	

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP2 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
5	Broker 2 routes order to Market Maker 1 via OTC Link ATS	*Broker 2 (IMID = BRKB) reports an* ***Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: 987:BRKB destination: CRD:IMID destinationType: F routedOrderID: XYZ012321 side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: NCTR|DLVT:MMA	The Order Route event reported by Broker 2 must contain a *handlingInstructions* value of DLVT:MMA indicating that the order is to be delivered to Market Maker 1.
6	OTC Link ATS receives the message from Broker 2	*OTC Link ATS reports an* ***Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: CRD:IMID senderIMID: 987:BRKB	The Order Accepted event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVT:MMA' indicating that the order is to be delivered to Market Maker 1.

#	Step	Reported Event	Comments
		senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: ATS side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: NCTR|DLVT:MMA isoInd: NA custDspIntrFlag: false	
7	OTC Link delivers the message to Market Maker 1	*OTC Link ATS reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: CRD:IMID destination: 789:MMA destinationType: F routedOrderID: XYZ012321 side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: NCTR|DLVF:BRKB quoteKeyDate: 20180501T000000 quoteID: Q6789	The Order Route event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVF:BRKB' indicating that the order was delivered from Broker 2. OTC Link ATS must also populate the *quoteID* linking to the related Quote Received event. The Order Route event will contain three separate and distinct linkages, including: • Intrafirm linkage between OTC Link ATS's Order Accepted and Order Route event • Intrafirm linkage between OTC Link ATS's Order Route event and Quote Received event • Interfirm Linkage between OTC Link ATS's Order Route event and the Market Maker's Order Accepted event
8	Market Maker 1 receives the order from Broker 2	*Market Maker (IMID = MMA) reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O87654	The Order Accepted event reported by the Market Maker must contain a *handlingInstructions* value of 'DLVF:BRKB' indicating that the order was delivered from Broker 2.

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: 789:MMA senderIMID: CRD:IMID senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: T side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: NCTR|DLVF:BRKB isoInd: NA custDspIntrFlag: false	
9	Market Maker 1 executes the customer order against the order received from Broker 2	*Market Maker 1 (IMID = MMA) reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp: 20180501T153039.834456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 1.15 capacity: P tapeTradeID: ORF1234 marketCenterID: O sideDetailsInd: N/A buyDetails: orderKeyDate: 20180501T000000 orderID: C45678 side: B sellDetails: orderKeyDate: 20180501T000000 orderID: O87654	Market Maker reports a Trade event reflecting that the order was executed against the customer order.

#	Step	Reported Event	Comments
		side: SL	

2.8.5. Representative Order Executed as a Result of an OTC Link Message

This scenario illustrates the CAT reporting requirements when a Market Maker (IMID:MMA) receives a customer order and chooses to handle the customer order by generating a representative order to facilitate the execution. The Market Maker then submits an unsolicited displayed (bid) quote to OTC Link Message, and the order is executed as the result of an OTC Link Message received from another Broker-Dealer (IMID:BRKB). In this scenario, the customer order is filled on a Riskless Principal basis.

In this scenario, Market Maker 1 receives a customer order, and generates a representative order to facilitate the execution. Market Maker 1 submits an unsolicited displayed quote in symbol XYZ on OTC Link ATS to buy 1,000 shares at 1.15 based on the customer order. OTC Link ATS subscriber and Industry Member Broker 2 sends an OTC Link ATS message electronically (i.e. via FIX) to trade at the quoted price. Market Maker 1 executes the trade and reports the trade to the ORF, then fills the customer order.
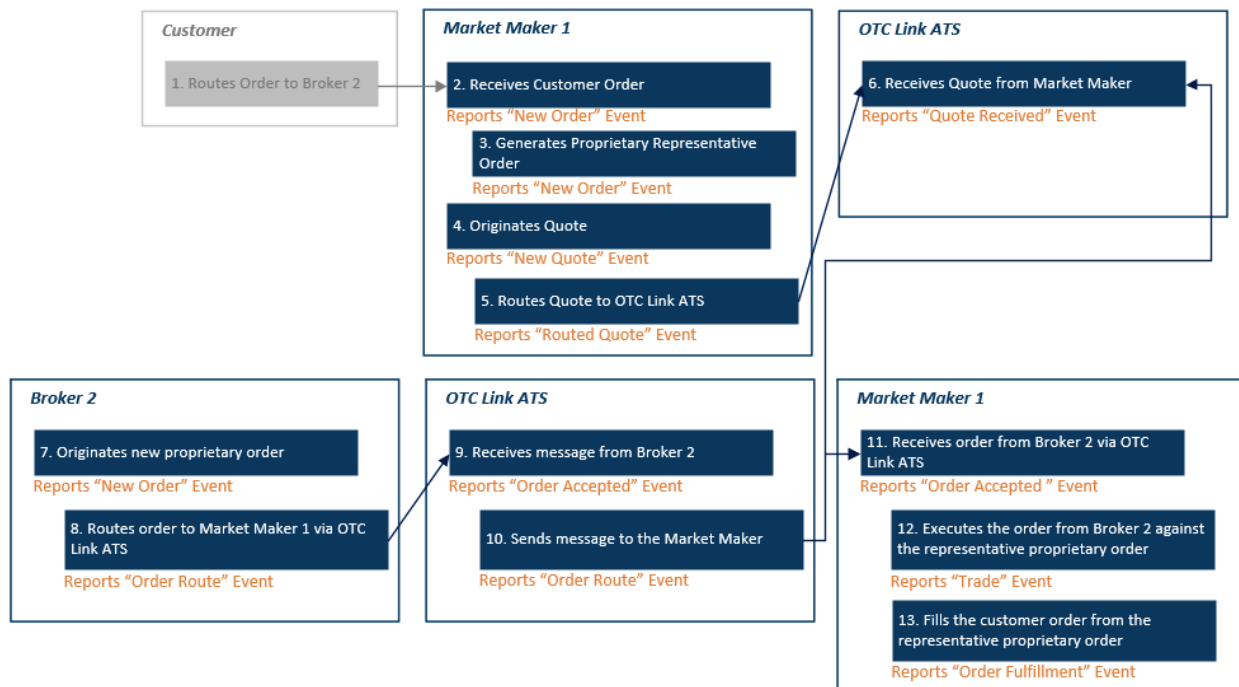
For the quote sent to OTC Link ATS:

- Market Maker 1 is required to report the following:
  - ◆ The origination of the quote (New Quote event)

- The route of the quote to OTC Link ATS (Routed Quote event)
- OTC Link ATS is required to report the following:
  - Receipt of the quote from Market Maker 1 (Quote Received event)

For the customer order, representative order, and the order sent from Broker 2 to Market Maker 1 via OTC Link ATS based on the posted quote:

- Broker 2 is required to report the following:
  - The origination of a new proprietary to sell 3,000 shares @1.15 (New Order event)
  - The route of the order to Market Maker 1 via OTC Link ATS (Order Route event to OTC Link ATS with *handlingInstructions* value 'DLVT:MMA')
- OTC Link ATS is required to report the following:
  - The receipt of the order from Broker 2 (Order Accepted event with a *handlingInstructions* value of 'DLVT:MMA')
  - The route of the order to Market Maker 1 (Order Route event with a *handlingInstructions* value of 'DLVF:BRKB', and a *quoteID* linking to the related MEQR event)
- Market Maker 1 is required to report the following:
  - The receipt of the customer order (New Order event)
  - The generation of a representative order (New Order event)
  - The order received from OTC Link ATS via Broker 2 (Order Accepted event from OTC Link ATS with *handlingInstructions* value 'DLVF:BRKB')
  - The execution of the representative order against the order from Broker 2 (Trade event linking to the ORF report)
  - The fill of the customer order from the representative order (Order Fulfillment event)

On Order Route events to OTC Link ATS, along with the corresponding Order Accepted event received by OTC Link ATS, a *handlingInstructions* value of 'DLVT' must be populated indicating the IMID of the party the route is being delivered to. On Order Accepted events received from OTC Link ATS, along with the corresponding Order Route event sent by OTC Link ATS, a *handlingInstructions* value of 'DLVF' must be populated indicating the IMID of the party the route is being delivered from.

If a route is sent from an Industry Member to a quote posted by a market maker, OTC Link ATS must populate the *quoteID* of the related Quote Received event in its Order Route event. The *quoteID* is not required to be populated on events representing counter messages that were not directed to a posted quote.

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 receives a customer order	*Market Maker 1 (IMID = MMA) reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: C45678 symbol: XYZ eventTimestamp: 20180501T153034.234456 manualFlag: false deptType: A side: B price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUS555 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Market Maker 1 generates a representative order	*Market Maker 1 (IMID = MMA) reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: R67890 symbol: XYZ eventTimestamp: 20180501T153034.534456 manualFlag: false deptType: A side: B price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: REP678 accountHolderType: P aggregatedOrders: C45678@20180501T000000@@ affiliateFlag: false 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. 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
3	Market Maker 1 originates a new quote and sends the quote to OTC Link ATS	*Market Maker 1 (IMID = MMA) reports a **New Quote event (1/2)*** type: MENQ quoteKeyDate: 20180501T000000 quoteID: NQ6789 symbol: XYZ eventTimestamp: 20180501T153035.234456 onlyOneQuoteFlag: true bidPrice: 1.15 bidQty: 1000 firmDesignatedID: MM999 accountHolderType: O *Market Maker 1 (IMID = MMA) reports a **Routed Quote event (2/2)*** type: MERQ quoteKeyDate: 20180501T000000 quoteID: NQ6789 symbol: XYZ eventTimestamp: 20180501T153035.234456 senderIMID: 456:MMA destination: CRD:IMID routedQuoteID: RQID12345 bidPrice: 1.15 bidQty: 1000	Market Maker 1 is required to link the Routed Quote event to the Quote Received event reported by OTC Link ATS via the *routedQuoteID* field.
4	OTC Link ATS receives the quote from Market Maker 1	*OTC Link ATS reports a **Quote Received event*** type: MEQR quoteKeyDate: 20180501T000000 quoteID: Q6789 symbol: XYZ receivedQuoteID: RQID12345 eventTimestamp: 20180501T153035.234456 receiverIMID: CRD:IMID senderIMID: 456:MMA onlyOneQuoteFlag: false bidPrice: 1.15 bidQty: 1000	OTC Link ATS is required to link the Quote Received event to the Routed Quote event reported by Market Maker 1 via the *receivedQuoteID* field.
5	Broker 2 originates a proprietary order	*Broker 2 (IMID = BRKB) reports a **New Order event***	

#	Step	Reported Event	Comments
		type: MENO orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false deptType: T side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP2 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
6	Broker 2 routes order to Market Maker 1 via OTC Link ATS	*Broker 2 (IMID = BRKB) reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: 987:BRKB destination: CRD:IMID destinationType: F routedOrderID: XYZ012321 side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: NCTR|DLVT:MMA	The Order Route event reported by Broker 2 must contain a *handlingInstructions* value of DLVT:MMA indicating that the order is to be delivered to Market Maker 1.

#	Step	Reported Event	Comments
7	OTC Link ATS receives the message from Broker 2	*OTC Link ATS reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: CRD:IMID senderIMID: 987:BRKB senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: ATS side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: NCTR|DLVT:MMA isoInd: NA custDspIntrFlag: false	The Order Accepted event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVT:MMA' indicating that the order is to be delivered to Market Maker 1.
8	OTC Link delivers the message to Market Maker 1	*OTC Link ATS reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: CRD:IMID destination: 789:MMA destinationType: F routedOrderID: XYZ012321 side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false	The Order Route event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVF:BRKB' indicating that the order was delivered from Broker 2. OTC Link ATS must also populate the *quoteID* linking to the related Quote Received event. The Order Route event will contain three separate and distinct linkages, including: • Intrafirm linkage between OTC Link ATS's Order Accepted and Order Route event • Intrafirm linkage between OTC Link ATS's Order Route event and Quote Received event • Interfirm Linkage between OTC Link ATS's Order Route event and the Market Maker's Order Accepted event

#	Step	Reported Event	Comments
		isoInd: NA handlingInstructions: NCTR|DLVF:BRKB quoteKeyDate: 20180501T000000 quoteID: Q6789	
9	Market Maker 1 receives the order from Broker 2	*Market Maker (IMID = MMA) reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O87654 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: 789:MMA senderIMID: CRD:IMID senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: T side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: NCTR|DLVF:BRKB isoInd: NA custDspIntrFlag: false	The Order Accepted event reported by the Market Maker must contain a *handlingInstructions* value of 'DLVF:BRKB' indicating that the order was delivered from Broker 2.
10	Market Maker 1 executes the representative order against the order received from Broker 2	*Market Maker 1 (IMID = MMA) reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp: 20180501T153039.834456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 1.15 capacity: P	Market Maker reports a Trade event reflecting that the order was executed against the representative order.

#	Step	Reported Event	Comments
		tapeTradeID: ORF1234 marketCenterID: O sideDetailsInd: N/A buyDetails: orderKeyDate: 20180501T000000 orderID: R67890 side: B sellDetails: orderKeyDate: 20180501T000000 orderID: O87654 side: SL	
11	Market Maker 1 fills the customer order	*Market Maker 1 (IMID = MMA) reports an **Order Fulfillment event*** type: MEOF fillKeyDate: 20180501T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20180501T153039.934456 manualFlag: false fulfillmentLinkType: Y quantity: 1000 price: 1.15 capacity: R clientDetails: orderKeyDate: 20180501T000000 orderID: C45678 side: B firmDetails: orderKeyDate: 20180501T000000 orderID: R67890 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. *firmDetails* are required.

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

This scenario illustrates the CAT reporting requirements when a Market Maker (IMID:MMA) displays a quote unrelated to any customer order flow. The Industry Member Broker 2 (IMID:BRKB) creates a proprietary order and sends a trade message to Market Maker 1. Before the proprietary order is executed, Broker 2 receives a customer order.

In this scenario, Market Maker 1 is quoting symbol XYZ on OTC Link ATS to buy 1,000 shares at 1.15. OTC Link ATS subscriber and Industry Member Broker 2 sends an OTC Link ATS message electronically (i.e. via FIX) to Market Maker 1 to trade at the posted quote. After sending the order, Broker 2 receives a customer order to sell 1,000 shares at 1.15. Market Maker 1 executes the trade (1,000 shares at 1.15), and reports the trade to the ORF. Broker 2 then fills the customer order.

For the quote sent to OTC Link ATS:

- Market Maker 1 is required to report the following:
    - The origination of the quote (New Quote event)
    - The route of the quote to OTC Link ATS (Routed Quote event)
- OTC Link ATS is required to report the following:
    - Receipt of the quote from Market Maker 1 (Quote Received event)

For the customer order and the order sent from Broker 2 to Market Maker 1 via OTC Link ATS based on the posted quote:

- Broker 2 is required to report the following:
    - The origination of a new proprietary order to sell 3,000 shares @1.15 (New Order event)
    - The route of the order to Market Maker 1 via OTC Link ATS (Order Route event to OTC Link ATS with *handlingInstructions* value 'DLVT:MMA')
    - The receipt of the customer order (New Order event)
    - The fill of the customer order (Order Fulfillment event)
- OTC Link ATS is required to report the following:

- ◆ The receipt of the order from Broker 2 (Order Accepted event with a *handlingInstructions* value of 'DLVT:MMA')
- ◆ The route of the order to Market Maker 1 (Order Route event with a *handlingInstructions* value of 'DLVF:BRKB', and a *quoteID* linking to the related MEQR event)
- • Market Maker 1 is required to report the following:
  - ◆ The order received from Broker 2 via OTC Link ATS (Order Accepted event from OTC Link ATS with *handlingInstructions* value 'DLVF:BRKB')
  - ◆ The execution of Broker 2's order from a prop account (Trade event linking to the ORF report)

On Order Route events to OTC Link ATS, along with the corresponding Order Accepted event received by OTC Link ATS, a *handlingInstructions* value of 'DLVT' must be populated indicating the IMID of the party the route is being delivered to. On Order Accepted events received from OTC Link ATS, along with the corresponding Order Route event sent by OTC Link ATS, a *handlingInstructions* value of 'DLVF' must be populated indicating the IMID of the party the route is being delivered from.

If a route is sent from an Industry Member to a quote posted by a market maker, OTC Link ATS must populate the *quoteID* of the related Quote Received event in its Order Route event. The *quoteID* is not required to be populated on events representing counter messages that were not directed to a posted quote.

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 originates a new quote and sends the quote to OTC Link ATS	*Market Maker 1 (IMID = MMA) reports a* **New Quote event (1/2)** type: MENQ quoteKeyDate: 20180501T000000 quoteID: NQ6789 symbol: XYZ eventTimestamp: 20180501T153035.234456 onlyOneQuoteFlag: true bidPrice: 1.15 bidQty: 1000 firmDesignatedID: MM999 accountHolderType: O *Market Maker 1 (IMID = MMA) reports a* **Routed Quote event (2/2)**	Market Maker 1 is required to link the Routed Quote event to the Quote Received event reported by OTC Link ATS via the *routedQuoteID* field.

#	Step	Reported Event	Comments
		type: MERQ quoteKeyDate: 20180501T000000 quoteID: NQ6789 symbol: XYZ eventTimestamp: 20180501T153035.234456 senderIMID: 456:MMA destination: CRD:IMID routedQuoteID: RQID12345 bidPrice: 1.15 bidQty: 1000	
2	OTC Link ATS receives the quote from Market Maker 1	*OTC Link ATS reports a **Quote Received event*** type: MEQR quoteKeyDate: 20180501T000000 quoteID: Q6789 symbol: XYZ receivedQuoteID: RQID12345 eventTimestamp: 20180501T153035.234456 receiverIMID: CRD:IMID senderIMID: 456:MMA onlyOneQuoteFlag: false bidPrice: 1.15 bidQty: 1000	OTC Link ATS is required to link the Quote Received event to the Routed Quote event reported by Market Maker 1 via the *receivedQuoteID* field.
3	Broker 2 originates a 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: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP2 accountHolderType: P	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 2 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.

#	Step	Reported Event	Comments
		affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
4	Broker 2 routes order to Market Maker 1 via OTC Link ATS	*Broker 2 (IMID = BRKB) reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: 987:BRKB destination: CRD:IMID destinationType: F routedOrderID: XYZ012321 side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: NCTR|DLVT:MMA	The Order Route event reported by Broker 2 must contain a *handlingInstructions* value of DLVT:MMA indicating that the order is to be delivered to Market Maker 1.
5	Broker 2 receives a customer order	*Broker 2 (IMID = BRKB) reports a **New Order event*** type: MENO orderKeyDate: 20180501T000000 orderID: C45678 symbol: XYZ eventTimestamp: 20180501T153039.334456 manualFlag: false deptType: A side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUS555	

#	Step	Reported Event	Comments
		accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
6	OTC Link ATS receives the message from Broker 2	*OTC Link ATS reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.434456 manualFlag: false receiverIMID: CRD:IMID senderIMID: 987:BRKB senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: ATS side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DLVT:MMA isoInd: NA custDspIntrFlag: false	The Order Accepted event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVT:MMA' indicating that the order is to be delivered to Market Maker 1.
7	OTC Link delivers the message to Market Maker 1	*OTC Link ATS reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.434456 manualFlag: false senderIMID: CRD:IMID destination: 789:MMA destinationType: F routedOrderID: XYZ012321 side: SL price: 1.15 quantity: 1000	The Order Route event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVF:BRKB' indicating that the order was delivered from Broker 2. OTC Link ATS must also populate the *quoteID* linking to the related Quote Received event. The Order Route event will contain three separate and distinct linkages, including: • Intrafirm linkage between OTC Link ATS's Order Accepted and Order Route event • Intrafirm linkage between OTC Link ATS's Order Route event and Quote Received event • Interfirm Linkage between OTC

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: DLVF:BRKB quoteKeyDate: 20180501T000000 quoteID: Q6789	Link ATS's Order Route event and the Market Maker's Order Accepted event
8	Market Maker 1 receives the order from Broker 2	*Market Maker (IMID = MMA) reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O87654 symbol: XYZ eventTimestamp: 20180501T153039.534456 manualFlag: false receiverIMID: 789:MMA senderIMID: CRD:IMID senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: T side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: NCTR|DLVF:BRKB isoInd: NA custDspIntrFlag: false	The Order Accepted event reported by the Market Maker must contain a *handlingInstructions* value of 'DLVF:BRKB' indicating that the order was delivered from Broker 2.
9	Market Maker 1 executes Broker 2's order from a prop account	*Market Maker 1 (IMID = MMA) reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp: 20180501T153039.834456 manualFlag: false cancelFlag: false cancelTimestamp:	Market Maker reports a Trade event reflecting that the order was executed against firm's prop account.

#	Step	Reported Event	Comments
		quantity: 1000 price: 1.15 capacity: P tapeTradeID: ORF1234 marketCenterID: O sideDetailsInd: NA buyDetails: side: B firmDesignatedID: PROP2 accountHolderType: P sellDetails: orderKeyDate: 20180501T000000 orderID: O87654 side: SL	
10	Broker 2 fills the customer order from the pre-existing prop order	*Broker 2 (IMID = BRKB) reports an* **Order Fulfillment event** type: MEOF fillKeyDate: 20180501T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20180501T153039.934456 manualFlag: false fulfillmentLinkType: YP quantity: 1000 price: 1.15 capacity: R clientDetails: orderKeyDate: 20180501T000000 orderID: C45678 side: SL firmDetails: orderKeyDate: 20180501T000000 orderID: O12346 side: B	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. *firmDetails* are required.

2.8.7. OTC Link Messages Directed by an OTC Link ATS Subscriber to a Global OTC Quote

This scenario illustrates the CAT reporting requirements when an OTC Link message is directed by an OTC Link ATS subscriber to a Global OTC quote.

In this example, the Global OTC best bid is 1.15. OTC Link ATS displays this to its subscribers. Industry Member Broker 1 originates a proprietary order and sends an OTC Link ATS message directed to Global OTC's quote. OTC Link ATS, on behalf of Industry Member Broker 1, creates a FIX order message and routes the order to Global OTC. Global OTC accepts the order, executes the trade, and reports the trade to the ORF.
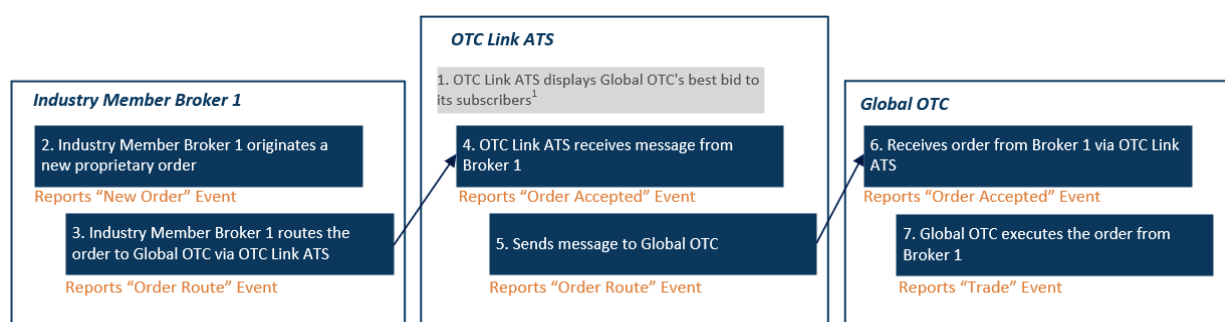
In accordance with FAQ J3, Industry Member Broker 1 is required to report:

- The origination of the proprietary order (New Order event)
- The route of the proprietary order to Global OTC via OTC Link ATS (Order Route event with *handlingInstructions* value 'DIR')

In accordance with FAQ J3, OTC Link ATS is required to report:

- The receipt of the proprietary order from Broker 1 (Order Accepted event with *handlingInstructions* value 'DIR')
- The route of the order to Global OTC (Order Route event with *handlingInstructions* value 'DIR)

In accordance with FAQ J3, Global OTC is required to report:

- The receipt of the order from Industry Member Broker 1 via OTC Link ATS (Order Accepted event)
- The execution linking to the ORF trade report (Trade event)

On Order Route events to OTC Link ATS, along with the corresponding Order Accepted event received by OTC Link ATS, a *handlingInstructions* value of 'DIR' must be populated.

In accordance with FAQ J3, Industry Member Broker 1 is required to report the new order and route to OTC Link ATS even if the order is not ultimately executed.

#	Step	Reported Event	Comments
1	OTC Link ATS displays Global OTC's best bid to its subscribers	*NA*	
2	Industry Member Broker 1 generates a new proprietary order to trade at Global OTC's displayed quote	*Industry Member Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180501T000000 orderID: O12321 symbol: XYZ eventTimestamp: 20180501T153030.885532 manualFlag: false deptType: T side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP2 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Industry Member Broker 1 routes the order to OTC Link ATS	*Broker 1 reports an* **Order Route event** type: MEOR orderKeyDate: 20180501T000000 orderID: O12321 symbol: XYZ eventTimestamp: 20180501T153030.885532 manualFlag: false senderIMID: 987:ABDC destination: CRD:IMID destinationType: F routedOrderID: XYZ012321 side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false	The *destination* field must be populated with CRD and IMID of OTC Link ATS.

#	Step	Reported Event	Comments
		isoInd: NA handlingInstructions: DIR	
4	OTC Link ATS receives the order from Broker 1	*OTC Link ATS reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153030.885532 manualFlag: false receiverIMID: CRD:IMID senderIMID: 987:ABDC senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: ATS side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DIR isoInd: NA custDspIntrFlag: false	The Order Accepted event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DIR'.
5	OTC Link ATS, on behalf of Industry Member Broker 1, creates a FIX order message and routes the order to Global OTC	*OTC Link ATS reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153030.885532 manualFlag: false senderIMID: CRD:IMID destination: CRD:IMID destinationType: F routedOrderID: XYZ012321 side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501	The *destination* field must be populated with CRD and IMID of Global OTC.

#	Step	Reported Event	Comments
		tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
6	Global OTC accepts the order from Industry Member Broker 1 via OTC Link ATS	*Global OTC reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153030.885532 manualFlag: false receiverIMID: CRD:IMID senderIMID: CRD:IMID senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: ATS side: SL price: 1.15 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: isoInd: NA custDspIntrFlag: false seqNum: 1250 atsDisplayInd: Y displayPrice: 0 workingPrice: 1.15 displayQty: 1.15 atsOrderType: EX1 nbbPrice: 0 nboPrice: 0 nbboSource: NA nbboTimestamp: 20180501T153030.885532	The *senderIMID* must be populated with CRD and IMID of OTC Link ATS.
7	Global OTC executes the order from Industry Member Broker 1	Global OTC reports a **Trade event** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR124 / symbol: XYZ	Global OTC crosses order O98765 with order O34567

#	Step	Reported Event	Comments
		eventTimestamp: 20180501T153030.985531 manualFlag: false cancelFlag: false cancelTimestamp: quoteKeyDate: quoteID: quantity: 1000 price: 1.15 capacity: A tapeTradeID: ORF1234 marketCenterID: O sideDetailsInd: NA buyDetails: orderKeyDate: 20180501T000000 orderID: O34567 side: B sellDetails: orderKeyDate: 20180501T000000 orderID: O98765 side: SL quotingIDQS: seqNum: 1271 nbbPrice: 0 nboPrice: 0 nbboSource: NA nbboTimestamp: 20180501T153010.334456	

2.8.8. Unsolicited Cancellation by OTC Link ATS

This scenario illustrates the CAT reporting requirements when an Industry Member (IMID:BRKB) sends an order to another Market Maker (IMID:MMA) via an OTC Link Message and OTC Link ATS cancels the order without receiving an explicit cancel request.

In this scenario, Market Maker 1 is quoting symbol XYZ on OTC Link ATS to buy 1,000 shares at 1.15. OTC Link ATS subscriber and Industry Member Broker 2 sends an OTC Link ATS message electronically (i.e. via FIX) to Market Maker 1 indicating that the price is not negotiable. OTC Link ATS then cancels the order without receiving an explicit cancel request due to market conditions, such as a trading halt. Note that there is a distinction from implicit cancels, such as IOC orders. In these cases, Industry Members are not required to report a cancellation because it is implied by the circumstances.

Since the cancellation was initiated by OTC Link ATS, Broker 2 is not required to report a Route Cancelled event. Broker 2 and Market Maker 1 are required to report any action taken on the order as a result of the unsolicited cancellation, including a cancellation of the order on its own books and records.
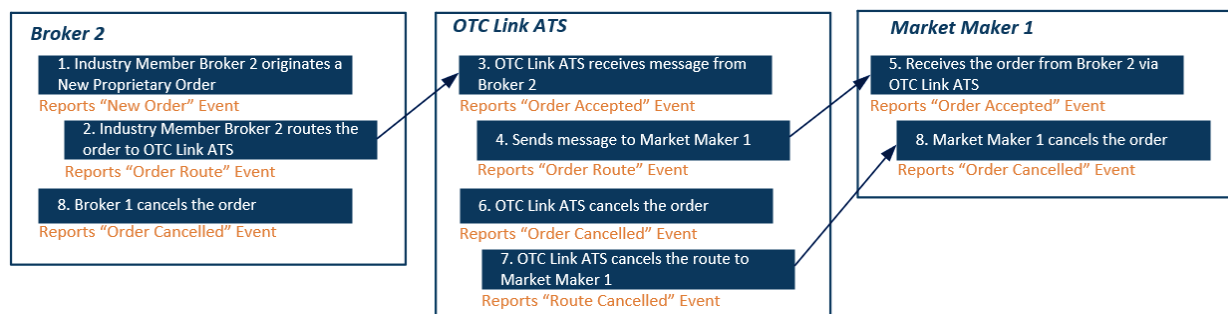
For illustration purposes, this scenario illustrates the events that occur beginning when BRKB sends the OTC Link Message and does not illustrate each quote event reported by the market maker and OTC Link ATS.

For the order sent from Broker 2 to Market Maker 1 via OTC Link ATS based on the posted quote:

- Broker 2 is required to report the following:
  - The origination of a new proprietary order to sell 3,000 shares @1.15 (New Order event)
  - The route of the order to Market Maker 1 via OTC Link ATS (Order Route event to OTC Link ATS with *handlingInstructions* value 'DLVT:MMA' and 'NCTR')
- OTC Link ATS is required to report the following:
  - The receipt of the order from Broker 2 (Order Accepted event with a *handlingInstructions* value of 'DLVT:MMA' and 'NCTR')
  - The route of the order to Market Maker 1 (Order Route event with a *handlingInstructions* value of 'DLVF:BRKB' and 'NCTR', and a *quoteID* linking to the related MEQR event)
- Market Maker 1 is required to report the following:
  - The order received from Broker 2 via OTC Link ATS (Order Accepted event from OTC Link ATS with *handlingInstructions* value 'DLVF:BRKB' and 'NCTR')

For the unsolicited cancel by OTC Link ATS:

- OTC Link ATS is required to report the following:
  - The cancellation of the order (Order Cancelled event)
  - The cancellation of the route to Market Maker 1 (Route Cancelled event)
- Broker 2 and Market Maker 1 are required to report the following:
  - The cancellation of the order on their books and records (Order Cancelled events)

On Order Route events to OTC Link ATS, along with the corresponding Order Accepted event received by OTC Link ATS, a *handlingInstructions* value of 'DLVT' must be populated indicating the IMID of the party the route is being delivered to. On Order Accepted events received from OTC Link ATS, along with the corresponding Order Route event sent by OTC Link ATS, a *handlingInstructions* value of 'DLVF' must be populated indicating the IMID of the party the route is being delivered from. Orders where the price is not negotiable must be marked with a *handlingInstructions* value of 'NCTR'.

If a route is sent from an Industry Member to a quote posted by a market maker, OTC Link ATS must populate the *quoteID* of the related Quote Received event in its Order Route event. The *quoteID* is not required to be populated on events representing counter messages that were not directed to a posted quote.

#	Step	Reported Event	Comments
1	Broker 2 originates a 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: false representativeInd: N	
2	Broker 2 routes order to Market Maker 1 via OTC Link ATS	*Broker 2 (IMID = BRKB) reports an* **Order Route event** type: MEOR orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.234456	The Order Route event reported by Broker 2 must contain a *handlingInstructions* value of DLVT:MMA indicating that the order is to be delivered to Market Maker 1. The Order Route event must also contain a *handlingInstructions* value of NCTR indicating that the price is not negotiable.

| #	Step	Reported Event	Comments
		manualFlag: false senderIMID: 987:BRKB destination: CRD:IMID destinationType: F routedOrderID: XYZ012321 side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: NCTR|DLVT:MMA	
3	OTC Link ATS receives the message from Broker 2	*OTC Link ATS reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: CRD:IMID senderIMID: 987:BRKB senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: ATS side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: NCTR|DLVT:MMA isoInd: NA custDspIntrFlag: false	The Order Accepted event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVT:MMA' indicating that the order is to be delivered to Market Maker 1. The Order Accepted event must also contain a *handlingInstructions* value of NCTR indicating that the price is not negotiable.
4	OTC Link delivers the message to Market Maker 1	*OTC Link ATS reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000	The Order Route event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVF:BRKB' indicating that the order was delivered from Broker 2.

#	Step	Reported Event	Comments
		orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: CRD:IMID destination: 789:MMA destinationType: F routedOrderID: XYZ012321 side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: NCTR|DLVF:BRKB quoteKeyDate: 20180501T000000 quoteID: Q6789	The Order Route event must also contain a *handlingInstructions* value of 'NCTR' indicating that the price is not negotiable. OTC Link ATS must also populate the *quoteID* linking to the related Quote Received event. The Order Route event will contain three separate and distinct linkages, including: • Intrafirm linkage between OTC Link ATS's Order Accepted and Order Route event • Intrafirm linkage between OTC Link ATS's Order Route event and Quote Received event • Interfirm Linkage between OTC Link ATS's Order Route event and the Market Maker's Order Accepted event
5	Market Maker 1 receives the order	*Market Maker (IMID = MMA) reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O87654 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: 789:MMA senderIMID: CRD:IMID senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: T side: SL price: 1.14 quantity: 3000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: NCTR|DLVF:BRKB isoInd: NA custDspIntrFlag: false	The Order Accepted event reported by the Market Maker must contain a *handlingInstructions* value of 'DLVF:BRKB' indicating that the order was delivered from Broker 2. The Order Accepted event must also contain a *handlingInstructions* value of 'NCTR' indicating that the price is not negotiable.

#	Step	Reported Event	Comments
6	OTC Link ATS cancels the order	*OTC Link ATS reports an **Order Cancelled event*** event type: MEOC orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.334456 cancelQty: 3000 leavesQty: 0 initiator: F requestTimestamp:	OTC Link ATS is not required to capture a cancel request time, since it did not receive a cancel request.
7	OTC Link ATS cancels the route to Market Maker 1	*OTC Link ATS reports a **Route Cancelled event*** type: MECR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.334456 manualFlag: false cancelQty: 3000 senderIMID: CRD:IMID destination: 789:MMA destinationType: F routedOrderID: XYZ012321	
8	Broker 2 and Market Maker 1 cancel the order on their books and records	*Broker 2 reports an **Order Cancelled event** (1/2)* event type: MEOC orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.434456 cancelQty: 3000 leavesQty: 0 initiator: F requestTimestamp: *Market Maker 1 reports an **Order Cancelled event** (2/2)*	Since the route sent to Marker Maker 1 was cancelled, Market Maker 1 must report an *initiator* value of 'C' and must capture the *requestTimestamp*. Since Broker 2's order was unsolicited cancelled by the destination, Broker 2 must report an *initiator* value of 'F'.

#	Step	Reported Event	Comments
		event type: MEOC orderKeyDate: 20180501T000000 orderID: O87654 symbol: XYZ eventTimestamp: 20180501T153039.434456 cancelQty: 3000 leavesQty: 0 initiator: C requestTimestamp: 20180501T153039.334456	

2.8.9. Trade Executed as a Result of an OTC Link ATS MAX Trade Message

This scenario illustrates the CAT reporting requirements when an Industry Member (IMID: BRK1) sends a MAX trade message to multiple Market Makers via OTC Link ATS.

In this scenario, Market Maker 1 (IMID: MM1), Market Maker 2 (IMID: MM2), and Market Maker 3 (IMID: MM3) have open quotes in symbol XYZ for 1,000 shares each. Industry Member Broker 1 has 2,000 shares of proprietary interest and sends an OTC Link MAX trade message identifying MM1, MM2, and MM3 as the respondents.

Upon receipt, MM1 immediately gives a partial fill for 1,000 shares. OTC Link ATS sends an updated MAX message to the respondents identified by IM1 indicating that the order has been partially filled. Upon receipt of the updated message, MM2 immediately gives a fill for the remainder of the order. OTC Link ATS then informs the remaining respondents that the order has been fully filled.

Broker 1
1. Industry Member Broker 1 originates a New Proprietary Order
Reports "New Order" Event
2. Industry Member Broker 1 routes MAX message to Market Makers 1, 2, and 3 via OTC Link ATS
Reports "Order Route" Event

OTC Link ATS
3. Receives MAX message from Broker 1
Reports "Order Accepted" Event
4. Sends MAX message to Market Maker 1
Reports "Order Route" Event
4. Sends MAX message to Market Maker 2
Reports "Order Route" Event
7. Sends message to Market Maker 2 reflecting reduced share quantity
Reports "Route Modified" Event
4. Sends MAX message to Market Maker 3
Reports "Order Route" Event
7. Sends message to Market Maker 3 reflecting reduced share quantity
Reports "Route Modified" Event
10. Cancels the message to Market Maker 3
Reports "Route Cancelled" Event

Market Maker 1
5. Receives the MAX message from Broker 1 via OTC Link ATS
Reports "Order Accepted" Event
6. Partially executes the order
Reports "Trade" Event

Market Maker 2
5. Receives the MAX message from Broker 1 via OTC Link ATS
Reports "Order Accepted" Event
8. Receives the updated MAX message from OTC Link ATS
Reports "Order Modified" Event
9. Executes the remainder of the order
Reports "Trade" Event

Market Maker 3
5. Receives the MAX message from Broker 1 via OTC Link ATS
Reports "Order Accepted" Event
8. Receives the updated MAX message from OTC Link ATS
Reports "Order Modified" Event
11. Receives the message from OTC Link ATS and cancels the order
Reports "Order Cancelled" Event

For illustration purposes, this scenario illustrates the events that occur beginning when Broker 1 sends the MAX trade message and does not illustrate each quote event reported by each market maker and OTC Link ATS.

For the MAX trade message sent from Broker 1 to the three market makers based on their posted quotes:

- Broker 1 is required to report the following:
  - The origination of a new proprietary order to sell 2,000 shares (New Order event)
  - The route of the MAX trade message to each Market Maker via OTC Link ATS (Order Route event to OTC Link ATS with *handlingInstructions* value 'DLVT:MM1', 'DLVT:MM2', and 'DLVT:MM3')

- OTC Link ATS is required to report the following:
  - The receipt of the MAX trade message from Broker 1 (Order Accepted event with a *handlingInstructions* value of 'DLVT:MM1', 'DLVT:MM2', and 'DLVT:MM3')
  - The initial route of the MAX trade message for 2,000 shares to each Market Maker (Order Route events with a *handlingInstructions* value of 'DLVF:IM1' and a *quoteID* linking to the related MEQR event for each market maker)
  - The modification of the MAX trade message to MM2 and MM3 for 1,000 shares reflecting a reduction in shares after the partial execution by MM1 (Route Modified events with a *handlingInstructions* value of 'DLVF:IM1')

- ◆ The cancellation of the MAX trade message to MM3 after the order was fully filled by MM2 (Route Cancelled event)

- Market Maker 1 is required to report the following:
  - ◆ The initial MAX trade message for 2,000 shares received from Broker 1 via OTC Link ATS (Order Accepted events from OTC Link ATS with *handlingInstructions* value 'DLVF:IM1')
  - ◆ The partial execution of the order for 1,000 shares from the market maker's prop account (Trade event linking to the ORF report)

- Market Maker 2 is required to report the following:
  - ◆ The initial MAX trade message for 2,000 shares received from Broker 1 via OTC Link ATS (Order Accepted events from OTC Link ATS with *handlingInstructions* value 'DLVF:IM1')
  - ◆ The modified MAX trade message for 1,000 shares (Order Modified events from OTC Link ATS with *handlingInstructions* value 'DLVF:IM1')
  - ◆ The partial execution of the order for 1,000 shares from the market maker's prop account (Trade event linking to the ORF report)

- Market Maker 3 is required to report the following:
  - ◆ The initial MAX trade message for 2,000 shares received from Broker 1 via OTC Link ATS (Order Accepted events from OTC Link ATS with *handlingInstructions* value 'DLVF:IM1')
  - ◆ The modified MAX trade message for 1,000 shares (Order Modified events from OTC Link ATS with *handlingInstructions* value 'DLVF:IM1')
  - ◆ The cancellation of the MAX trade message (Order Cancelled event)

On Order Route events to OTC Link ATS, along with the corresponding Order Accepted event received by OTC Link ATS, a *handlingInstructions* value of 'DLVT' must be populated indicating the IMID of the party the route is being delivered to. In this scenario, since the MAX trade message was delivered to multiple market makers, a separate instruction must be populated identifying the IMID of each market maker that the MAX trade message was delivered to.

On Order Accepted events received from OTC Link ATS, along with the corresponding Order Route event sent by OTC Link ATS, a *handlingInstructions* value of 'DLVF' must be populated indicating the IMID of the party the route is being delivered from.

Since the MAX trade message was sent from an Industry Member to multiple quotes posted by different market makers, OTC Link ATS must populate the *quoteID* of the related Quote Received for each Order Route event to each market maker.

#	Step	Reported Event	Comments
1	Broker 1 originates a proprietary order	*Broker 1 (IMID = BRK1) 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: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP2 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Broker 1 routes MAX trade message to Market Makers 1, 2, and 3 via OTC Link ATS	*Broker 1 (IMID = BRK1) reports an* **Order Route event** type: MEOR orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: 987:BRK1 destination: CRD:IMID destinationType: F routedOrderID: XYZ012321 side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: DLVT:MM1|DLVT:MM2|DLVT:MM3	The Order Route event reported by Broker 1 must contain a *handlingInstructions* value of 'DLVT:MM1', 'DLVT:MM2', and 'DLVT:MM3' indicating that the order is to be delivered to all three market makers.

#	Step	Reported Event	Comments
3	OTC Link ATS receives the message from Broker 1	*OTC Link ATS reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: CRD:IMID senderIMID: 987:BRK1 senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: ATS side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DLVT:MM1|DLVT:MM2|DLVT:MM3 isoInd: NA custDspIntrFlag: false	The Order Accepted event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVT:MM1', 'DLVT:MM2', and 'DLVT:MM3' indicating that the order is to be delivered to all three market makers. OTC Link ATS must populate the *atsOrderType* field with the relevant ATS Order Type for the MAX trade message.
4	OTC Link delivers the message to each Market Maker	*OTC Link ATS reports an **Order Route event (1/3)*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: CRD:IMID destination: 789:MM1 destinationType: F routedOrderID: XYZ012322 side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG	The Order Route event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVF:BRK1' indicating that the order was delivered from Broker 1. OTC Link ATS must also populate the *quoteID* linking to the related Quote Received event for each market maker. Each Order Route event will contain three separate and distinct linkages, including: • Intrafirm linkage between OTC Link ATS's Order Accepted and Order Route event • Intrafirm linkage between OTC Link ATS's Order Route event and Quote Received event • Interfirm Linkage between OTC Link ATS's Order Route event and the Market Maker's Order

#	Step	Reported Event	Comments
		affiliateFlag: false isoInd: NA handlingInstructions: DLVF:BRK1 quoteKeyDate: 20180501T000000 quoteID: Q6789 *OTC Link ATS reports an **Order Route event (2/3)*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: CRD:IMID destination: 654:MM2 destinationType: F routedOrderID: XYZ012323 side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: DLVF:BRK1 quoteKeyDate: 20180501T000000 quoteID: Q9876 *OTC Link ATS reports an **Order Route event (3/3)*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: CRD:IMID destination: 321:MM3 destinationType: F routedOrderID: XYZ012324 side: SL price: 1.14	Accepted event

#	Step	Reported Event	Comments
		quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: DLVF:BRK1 quoteKeyDate: 20180501T000000 quoteID: Q1234	
5	Each Market Maker receives the message	*Market Maker 1 (IMID = MM1) reports an Order Accepted event* event type: MEOA orderKeyDate: 20180501T000000 orderID: O87654 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: 789:MM1 senderIMID: CRD:IMID senderType: F routedOrderID: XYZ012322 affiliateFlag: false deptType: T side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DLVF:BRK1 isoInd: NA custDspIntrFlag: false *Market Maker 2 (IMID = MM2) reports an Order Accepted event* event type: MEOA orderKeyDate: 20180501T000000 orderID: O76543 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: 654:MM2 senderIMID: CRD:IMID	The Order Accepted events reported by the Market Makers must contain a *handlingInstructions* value of 'DLVF:BRK1' indicating that the order was delivered from Broker 1.

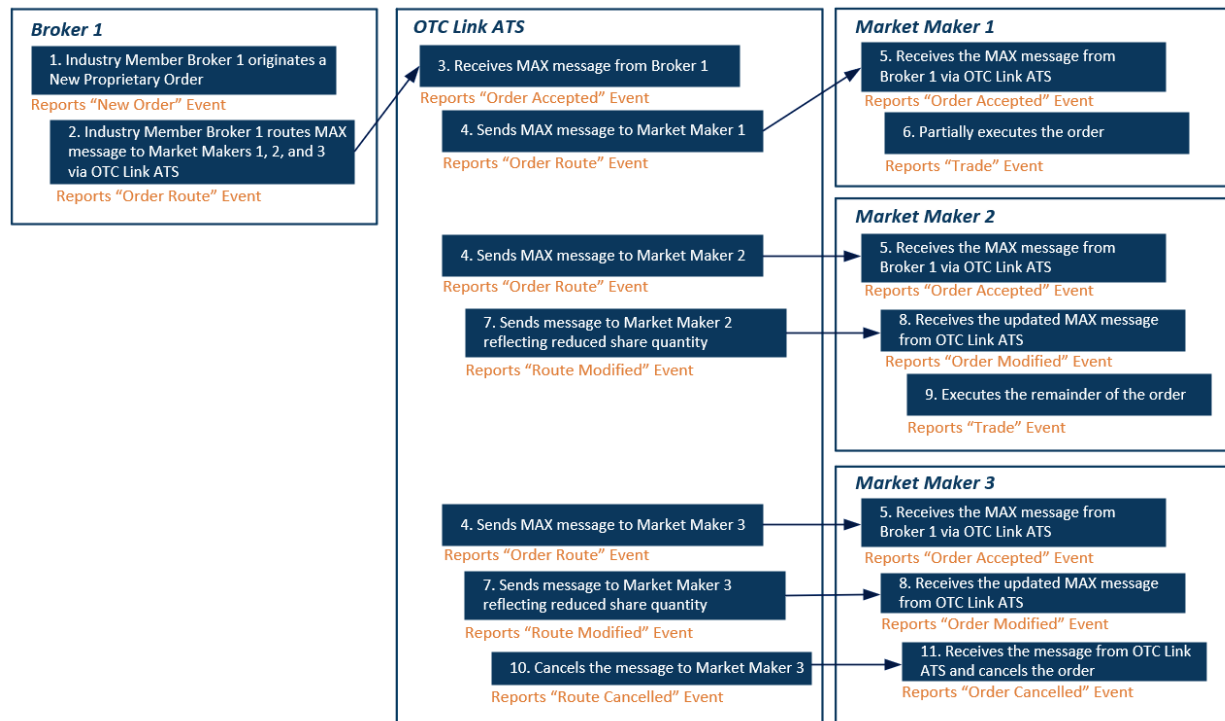| #	Step	Reported Event	Comments
		senderType: F routedOrderID: XYZ012323 affiliateFlag: false deptType: T side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DLVF:BRK1 isoInd: NA custDspIntrFlag: false *Market Maker 3 (IMID = MM3) reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O54321 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: 321:MM3 senderIMID: CRD:IMID senderType: F routedOrderID: XYZ012324 affiliateFlag: false deptType: T side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DLVF:BRK1 isoInd: NA custDspIntrFlag: false	
6	Market Maker 1 partially executes the order	*Market Maker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp:	Market Maker 1 reports a Trade event reflecting that the order was executed out of the firm's prop account.

#	Step	Reported Event	Comments
		20180501T153039.834456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 1.14 capacity: P tapeTradeID: ORF1234 marketCenterID: O sideDetailsInd: N/A buyDetails: side: B firmDesignatedID: PROP2 accountHolderType: P sellDetails: orderKeyDate: 20180501T000000 orderID: O87654 side: SL	
7	OTC Link delivers a message to MM2 and MM3 reflecting a reduced shares quantity	*OTC Link ATS reports a **Route Modified event (1/2)*** type: MEMR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153040.234456 manualFlag: false senderIMID: CRD:IMID destination: 654:MM2 destinationType: F routedOrderID: XYZ012323M priorRoutedOrderID: XYZ012323 side: SL price: 1.14 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: DLVF:BRK1 *OTC Link ATS reports a **Route Modified event (2/2)***	The Route Modified event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVF:BRK1' indicating that the order was delivered from Broker 1.

#	Step	Reported Event	Comments
		type: MEMR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153040.234456 manualFlag: false senderIMID: CRD:IMID destination: 321:MM3 destinationType: F routedOrderID: XYZ012324M priorRoutedOrderID: XYZ012324 side: SL price: 1.14 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: DLVF:BRK1	
8	MM2 and MM3 receive the message	*Market Maker 2 (IMID = MM2) reports an **Order Modified event*** event type: MEOM orderKeyDate: 20180501T000000 orderID: O76543 priorOrderKeyDate: priorOrderID: symbol: XYZ eventTimestamp: 20180501T153040.234456 manualFlag: false receiverIMID: 654:MM2 senderIMID: CRD:IMID senderType: F routedOrderID: XYZ012323M affiliateFlag: false deptType: T side: SL price: 1.14 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DLVF:BRK1 isoInd: NA	The Order Modified events reported by the Market Makers must contain a *handlingInstructions* value of 'DLVF:BRK1' indicating that the order was delivered from Broker 1.

#	Step	Reported Event	Comments
		custDspIntrFlag: false *Market Maker 3 (IMID = MM3) reports an **Order Modified event*** event type: MEOM orderKeyDate: 20180501T000000 orderID: O54321 priorOrderKeyDate: priorOrderID: symbol: XYZ eventTimestamp: 20180501T153040.234456 manualFlag: false receiverIMID: 321:MM3 senderIMID: CRD:IMID senderType: F routedOrderID: XYZ012324M affiliateFlag: false deptType: T side: SL price: 1.14 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DLVF:BRK1 isoInd: NA custDspIntrFlag: false	
9	Market Maker 2 executes the remainder of the order	*Market Maker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp: 20180501T153040.834456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 1.14 capacity: P tapeTradeID: ORF1235 marketCenterID: O sideDetailsInd: N/A	Market Maker 2 reports a Trade event reflecting that the order was executed out of the firm's prop account.

#	Step	Reported Event	Comments
		buyDetails: side: B firmDesignatedID: PROP2 accountHolderType: P sellDetails: orderKeyDate: 20180501T000000 orderID: O76543 side: SL	
10	OTC Markets cancels the message to MM3	*OTC Link ATS reports a* **Route Cancelled event** type: MECR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153041.234456 manualFlag: false cancelQty: 1000 senderIMID: CRD:IMID destination: 321:MM3 destinationType: F routedOrderID: XYZ012324M	
11	MM3 receives the cancel message from OTC Markets and reports an Order Cancelled event	*Market Maker 3 (IMID = MM3) reports an* **Order Cancelled event** event type: MEOC orderKeyDate: 20180501T000000 orderID: O54321 symbol: XYZ eventTimestamp: 20180501T153041.234456 cancelQty: 1000 leavesQty: 0 initiator: C requestTimestamp: 20180501T153041.234456	The *initiator* field must be populated with a value of 'C', and the *requestTimestamp* must be populated with the time that the message was received from OTC Link ATS.

2.8.10. Market Maker Responds to an OTC Link ATS MAX Trade Message That Has Already Been Fully Filled

This scenario illustrates the CAT reporting requirements when an Industry Member (IMID: BRK1) sends a MAX trade message to multiple Market Makers via OTC Link ATS.

In this scenario, Market Maker 1 (IMID: MM1), Market Maker 2 (IMID: MM2), and Market Maker 3 (IMID: MM3) have open quotes in symbol XYZ for 1,000 shares each. Industry Member Broker 1 has 2,000 shares of proprietary interest and sends an OTC Link MAX trade message identifying MM1, MM2, and MM3 as the respondents.

Upon receipt, all three Market Makers respond with 1,000 share executions. Since there were only 2,000 shares available to execute, only the first two market makers receive executions, and the third market maker receives notification from OTC Link ATS that the order has already been fully executed.

For illustration purposes, this scenario illustrates the events that occur beginning when Broker 1 sends the MAX trade message and does not illustrate each quote event reported by each market maker and OTC Link ATS.

For the MAX trade message sent from Broker 1 to the three market makers based on their posted quotes:

- Broker 1 is required to report the following:
  - The origination of a new proprietary order to sell 2,000 shares (New Order event)
  - The route of the MAX trade message to each Market Maker via OTC Link ATS (Order Route event to OTC Link ATS with *handlingInstructions* value 'DLVT:MM1', 'DLVT:MM2', and 'DLVT:MM3')

- OTC Link ATS is required to report the following:
  - The receipt of the MAX trade message from Broker 1 (Order Accepted event with a *handlingInstructions* value of 'DLVT:MM1', 'DLVT:MM2', and 'DLVT:MM3')

- ◆ The route of the MAX trade message for 2,000 shares to each Market Maker (Order Route events with a *handlingInstructions* value of 'DLVF:IM1' and a *quoteID* linking to the related MEQR event for each market maker)
- ◆ The cancellation of the MAX trade message to MM3 after the order was fully filled (Route Cancelled event)

- Market Maker 1 is required to report the following:
  - ◆ The MAX trade message for 2,000 shares received from Broker 1 via OTC Link ATS (Order Accepted events from OTC Link ATS with *handlingInstructions* value 'DLVF:IM1')
  - ◆ The partial execution of the order for 1,000 shares from the market maker's prop account (Trade event linking to the ORF report)

- Market Maker 2 is required to report the following:
  - ◆ The MAX trade message for 2,000 shares received from Broker 1 via OTC Link ATS (Order Accepted events from OTC Link ATS with *handlingInstructions* value 'DLVF:IM1')
  - ◆ The partial execution of the order for 1,000 shares from the market maker's prop account (Trade event linking to the ORF report)

- Market Maker 3 is required to report the following:
  - ◆ The MAX trade message for 2,000 shares received from Broker 1 via OTC Link ATS (Order Accepted events from OTC Link ATS with *handlingInstructions* value 'DLVF:IM1')
  - ◆ The cancellation of the MAX trade message (Order Cancelled event)

On Order Route events to OTC Link ATS, along with the corresponding Order Accepted event received by OTC Link ATS, a *handlingInstructions* value of 'DLVT' must be populated indicating the IMID of the party the route is being delivered to. In this scenario, since the MAX trade message was delivered to multiple market makers, a separate instruction must be populated identifying the IMID of each market maker that the MAX trade message was delivered to.

On Order Accepted events received from OTC Link ATS, along with the corresponding Order Route event sent by OTC Link ATS, a *handlingInstructions* value of 'DLVF' must be populated indicating the IMID of the party the route is being delivered from.

Since the MAX trade message was sent from an Industry Member to multiple quotes posted by different market makers, OTC Link ATS must populate the *quoteID* of the related Quote Received for each Order Route event to each market maker.

#	Step	Reported Event	Comments
1	Broker 1 originates a proprietary order	*Broker 1 (IMID = BRK1) 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: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP2 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Broker 1 routes MAX trade message to Market Makers 1, 2, and 3 via OTC Link ATS	*Broker 1 (IMID = BRK1) reports an* **Order Route event** type: MEOR orderKeyDate: 20180501T000000 orderID: O12346 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: 987:BRK1 destination: CRD:IMID destinationType: F routedOrderID: XYZ012321 side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: DLVT:MM1|DLVT:MM2|DLVT:MM3	The Order Route event reported by Broker 1 must contain a *handlingInstructions* value of 'DLVT:MM1', 'DLVT:MM2', and 'DLVT:MM3' indicating that the order is to be delivered to all three market makers.

#	Step	Reported Event	Comments
3	OTC Link ATS receives the message from Broker 1	*OTC Link ATS reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: CRD:IMID senderIMID: 987:BRK1 senderType: F routedOrderID: XYZ012321 affiliateFlag: false deptType: ATS side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DLVT:MM1|DLVT:MM2|DLVT:MM3 isoInd: NA custDspIntrFlag: false	The Order Accepted event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVT:MM1', 'DLVT:MM2', and 'DLVT:MM3' indicating that the order is to be delivered to all three market makers. OTC Link ATS must populate the *atsOrderType* field with the relevant ATS Order Type for the MAX trade message.
4	OTC Link delivers the message to each Market Maker	*OTC Link ATS reports an **Order Route event (1/3)*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: CRD:IMID destination: 789:MM1 destinationType: F routedOrderID: XYZ012322 side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG	The Order Route event reported by OTC Link ATS must contain a *handlingInstructions* value of 'DLVF:BRK1' indicating that the order was delivered from Broker 1. OTC Link ATS must also populate the *quoteID* linking to the related Quote Received event for each market maker. Each Order Route event will contain three separate and distinct linkages, including: • Intrafirm linkage between OTC Link ATS's Order Accepted and Order Route event • Intrafirm linkage between OTC Link ATS's Order Route event and Quote Received event • Interfirm Linkage between OTC Link ATS's Order Route event and the Market Maker's Order

#	Step	Reported Event	Comments
		affiliateFlag: false isoInd: NA handlingInstructions: DLVF:BRK1 quoteKeyDate: 20180501T000000 quoteID: Q6789 *OTC Link ATS reports an **Order Route event (2/3)*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: CRD:IMID destination: 654:MM2 destinationType: F routedOrderID: XYZ012323 side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: DLVF:BRK1 quoteKeyDate: 20180501T000000 quoteID: Q9876 *OTC Link ATS reports an **Order Route event (3/3)*** type: MEOR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false senderIMID: CRD:IMID destination: 321:MM3 destinationType: F routedOrderID: XYZ012324 side: SL price: 1.14	Accepted event

#	Step	Reported Event	Comments
		quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: DLVF:BRK1 quoteKeyDate: 20180501T000000 quoteID: Q1234	
5	Each Market Maker receives the message	*Market Maker 1 (IMID = MM1) reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O87654 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: 789:MM1 senderIMID: CRD:IMID senderType: F routedOrderID: XYZ012322 affiliateFlag: false deptType: T side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DLVF:BRK1 isoInd: NA custDspIntrFlag: false *Market Maker 2 (IMID = MM2) reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O76543 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: 654:MM2 senderIMID: CRD:IMID	The Order Accepted events reported by the Market Makers must contain a *handlingInstructions* value of 'DLVF:BRK1' indicating that the order was delivered from Broker 1.

#	Step	Reported Event	Comments
		senderType: F routedOrderID: XYZ012323 affiliateFlag: false deptType: T side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DLVF:BRK1 isoInd: NA custDspIntrFlag: false *Market Maker 3 (IMID = MM3) reports an **Order Accepted event*** event type: MEOA orderKeyDate: 20180501T000000 orderID: O54321 symbol: XYZ eventTimestamp: 20180501T153039.234456 manualFlag: false receiverIMID: 321:MM3 senderIMID: CRD:IMID senderType: F routedOrderID: XYZ012324 affiliateFlag: false deptType: T side: SL price: 1.14 quantity: 2000 orderType: LMT timeInForce: DAY=20180501 tradingSession: REG handlingInstructions: DLVF:BRK1 isoInd: NA custDspIntrFlag: false	
6	Market Maker 1 partially executes the order	*Market Maker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp:	Market Maker 1 reports a Trade event reflecting that the order was executed out of the firm's prop account.

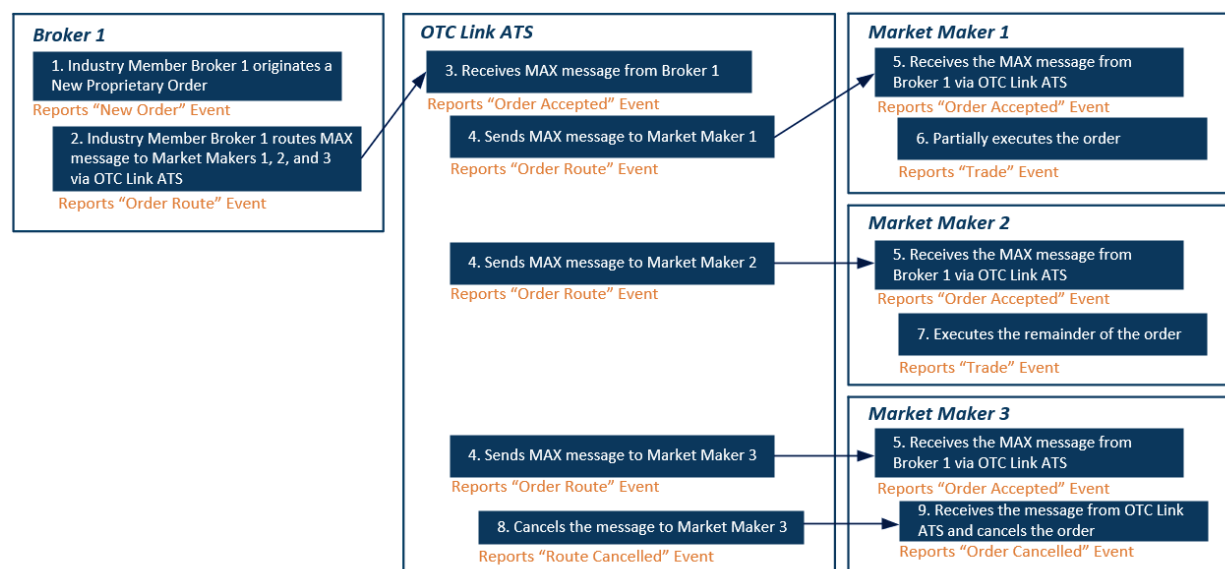| #	Step	Reported Event	Comments
		20180501T153039.834456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 1.14 capacity: P tapeTradeID: ORF1234 marketCenterID: O sideDetailsInd: N/A buyDetails: side: B firmDesignatedID: PROP2 accountHolderType: P sellDetails: orderKeyDate: 20180501T000000 orderID: O87654 side: SL	
7	Market Maker 2 executes the remainder of the order	*Market Maker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20180501T000000 tradeID: TR123 symbol: XYZ eventTimestamp: 20180501T153039.844456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 1.14 capacity: P tapeTradeID: ORF1235 marketCenterID: O sideDetailsInd: N/A buyDetails: side: B firmDesignatedID: PROP3 accountHolderType: P sellDetails: orderKeyDate: 20180501T000000 orderID: O76543 side: SL	Market Maker 2 reports a Trade event reflecting that the order was executed out of the firm's prop account.

#	Step	Reported Event	Comments
8	OTC Markets cancels the message to MM3	*OTC Link ATS reports a **Route Cancelled event*** type: MECR orderKeyDate: 20180501T000000 orderID: O98765 symbol: XYZ eventTimestamp: 20180501T153039.944456 manualFlag: false cancelQty: 1000 senderIMID: CRD:IMID destination: 321:MM3 destinationType: F routedOrderID: XYZ012324M	
9	MM3 receives the cancel message from OTC Markets and reports an Order Cancelled event	*Market Maker 3 (IMID = MM3) reports an **Order Cancelled event*** event type: MEOC orderKeyDate: 20180501T000000 orderID: O54321 symbol: XYZ eventTimestamp: 20180501T153041.234456 cancelQty: 1000 leavesQty: 0 initiator: C requestTimestamp: 20180501T153041.234456	The *initiator* field must be populated with a value of 'C' as it was a Customer/Client-initiated cancellation, and the *requestTimestamp* must be populated with the time that the message was received from OTC Link ATS.

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.
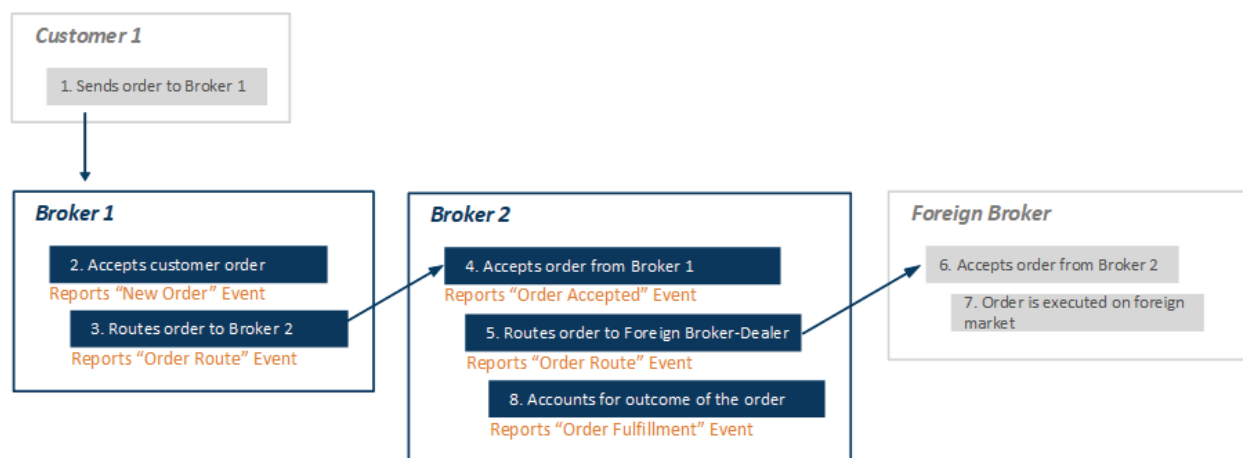
Industry Member Broker 1 is required to report:

- 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. While this scenario reflects the fill of a customer order on a foreign market, the same requirement to report an Order Fulfillment event would apply if the order were proprietary.

#	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	

#	Step	Reported Event	Comments
		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: 123:BRKA destination: 456:BRKB destinationType: F routedOrderID: XYZ123555 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: FOR 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: 20180501T153036.234556 manualFlag: true electronicDupFlag: false electronicTimestamp: receiverIMID: 456:BRKB senderIMID: 123:BRKA	

#	Step	Reported Event	Comments
		senderType: F routedOrderID: XYZ123555 affiliateFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: FOR isoInd: NA custDspIntrFlag: false	
5	Broker 2 routes the customer order to a non-reporting affiliated foreign broker-dealer	*Broker 2 reports an **Order Route event*** type: MEOR orderKeyDate: 20180501T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180501T153036.234556 manualFlag: false senderIMID: destination: destinationType: N routedOrderID: side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: FOR affiliateFlag: true isoInd: NA	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.
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 2 reports an **Order Fulfillment event*** type: MEOF fillKeyDate: 20180501T000000 fulfillmentID: FRGN123 symbol: XYZ eventTimestamp: 20180501T153045.234556	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.

#	Step	Reported Event	Comments
		fulfillmentLinkType: FOR quantity: 1000 price: 10.00 capacity: A clientDetails: orderKeyDate: 20180501T000000 orderID: O34567 side: B	

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.
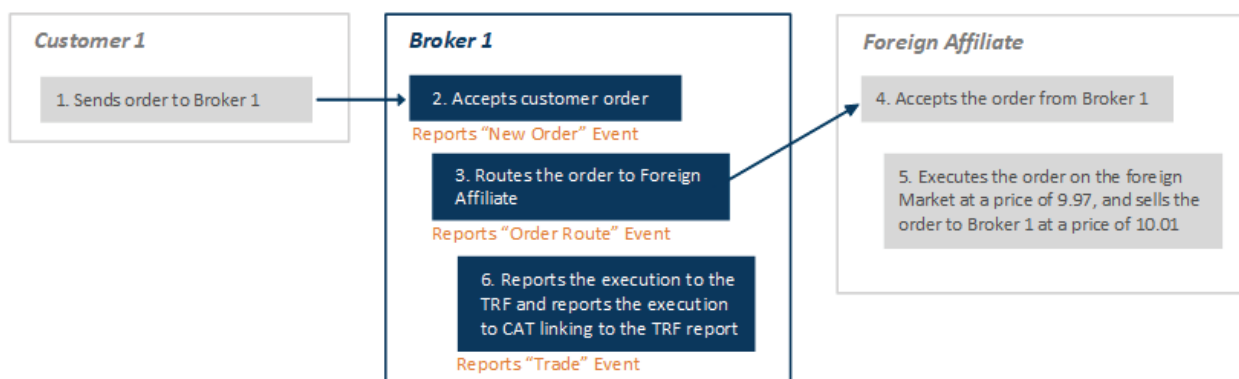
Industry Member Broker 1 is required to report:

- 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 a *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 *buyDetails* 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 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	When *destinationType* is populated as 'N', *senderIMID, destination,* and *routedOrderID* are not required.

#	Step	Reported Event	Comments
		routedOrderID: side: B price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY=20170801 tradingSession: FOR affiliateFlag: true isoInd: NA	
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: 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 *buyDetails* are populated.

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).
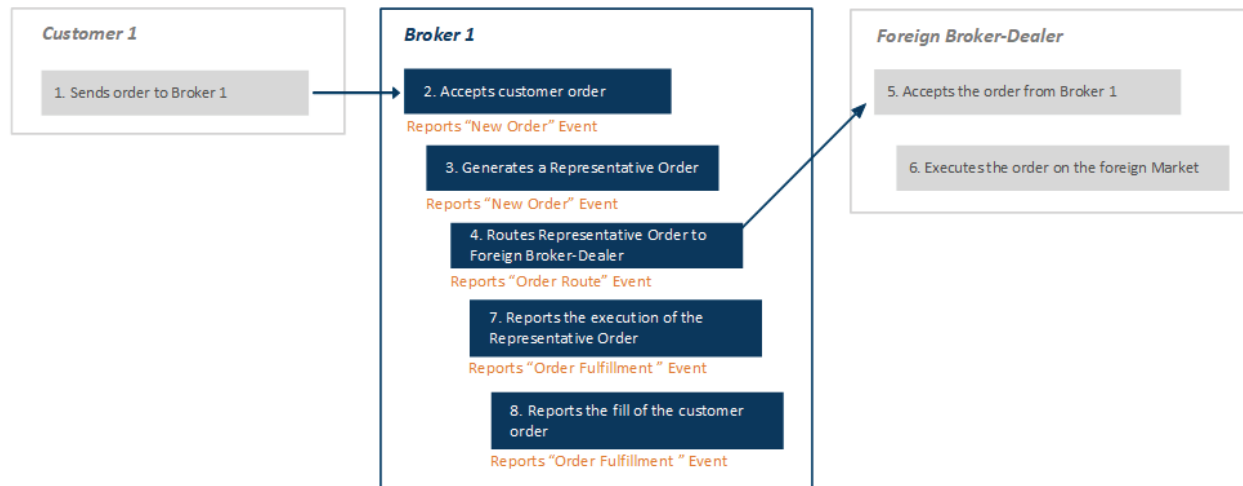
Industry Member Broker 1 is required to report:

- 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')

firmDetails 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*	

#	Step	Reported Event	Comments
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 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	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. The *aggregatedOrders* field must be populated.

#	Step	Reported Event	Comments
		representativeInd: Y	
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 @10.01	*NA*	This transaction is reported by to the foreign market.
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	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.

#	Step	Reported Event	Comments
		price: 10.01 capacity: P clientDetails: orderKeyDate: 20170801T000000 orderID: R12345 side: B	
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 orderID: R12345 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. *firmDetails* are required.

2.9.4. Industry Member Routes an Order in an OTC Equity Symbol of a Foreign Security to Another Industry Member with Discretion on Where to Execute

This scenario illustrates the CAT reporting requirements when Industry Member Broker 1 routes an order in an OTC equity symbol of a foreign security to another Industry Member Broker 2, and Broker 2 has discretion on how to execute the order. Broker 2 then chooses to route the order to a foreign market for execution. Broker 1 is unaware of the outcome of the order and therefore has an obligation to report to CAT in accordance with FAQs I2 and I4. However, Broker 2 knows that the order was executed and trade reported on a foreign market, and does not have an obligation to report to CAT in accordance with FAQ I7.
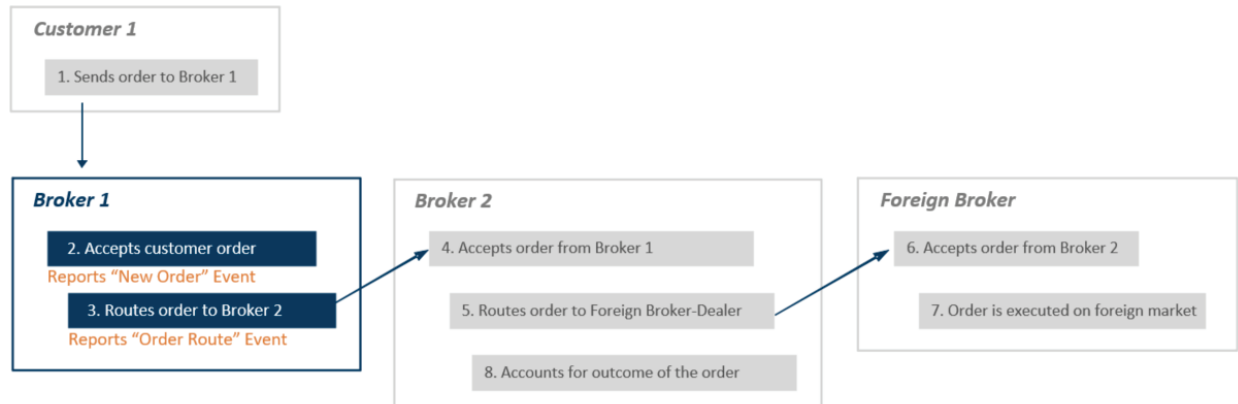
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The route of the order to Broker 2 (Order Route event with *destinationType* 'O')

While Broker 2 may optionally report this activity to CAT, it does not have a CAT reporting obligation in accordance with FAQ I7.

Broker 1 may populate a *destinationType* value of 'O' on its Order Route event to Broker 2. When *destinationType* 'O' is populated, linkage will be attempted on the Order Route event. After linkage is attempted, if no link is found, the firm will not receive an unlinked error.

#	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: ALL custDspIntrFlag: false firmDesignatedID: EFGHO001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false	

#	Step	Reported Event	Comments
		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: 123:BRKA destination: 456:BRKB destinationType: O routedOrderID: XYZ123555 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: ALL affiliateFlag: false isoInd: NA	If Broker 1 does not know that the order was executed and trade reported on a foreign market, or chooses to optionally report the order, then to avoid an interfirm linkage error, they should report the *destinationType* 'O'. When *destinationType* 'O' is populated, linkage will be attempted on the Order Route event. After linkage is attempted, if no link is found, the firm will not receive an unlinked error.
4	Broker 2 accepts the order from Broker 1	*NA*	Broker 2 knows that the order was executed and trade reported on a foreign market and does not have an obligation to report this activity to CAT.
5	Broker 2 routes the customer order to a foreign market for execution	*NA*	Broker 2 knows that the order was executed and trade reported on a foreign market and does not have an obligation to report this activity to CAT.

2.9.5. Industry Member Routes an Order in an OTC Equity Symbol of a Foreign Security to Another Industry Member with Instructions to Execute on a Foreign Market

This scenario illustrates the CAT reporting requirements when Industry Member Broker 1 routes an order in an OTC equity symbol of a foreign security to another Industry Member Broker 2 with instructions to direct the order to a foreign market for execution. In accordance with FAQ I6, neither Broker 1 nor Broker 2 have an obligation to report this activity to CAT. However, Broker 2 chooses to optionally report this activity.
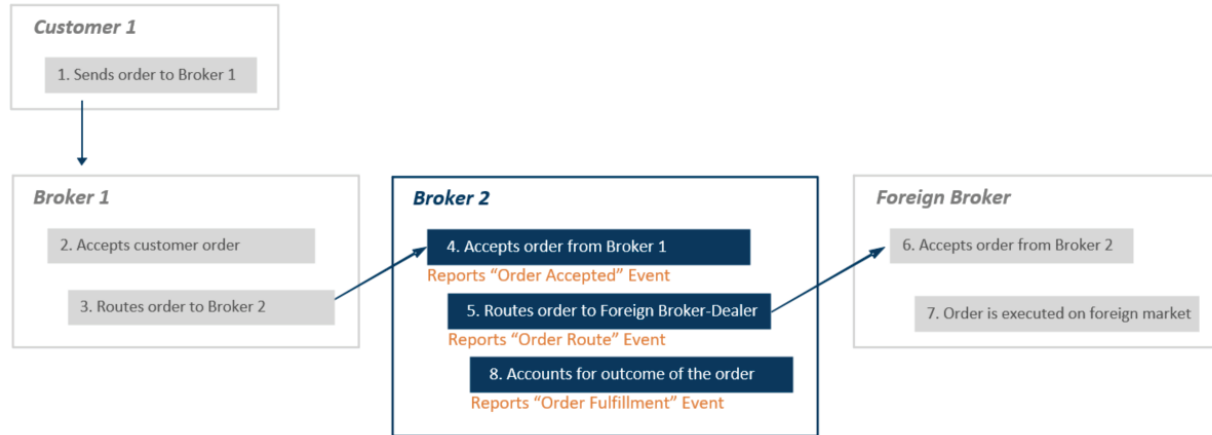
Industry Member Broker 2 optionally reports:

- The receipt of the order from Broker 1 (Order Accepted event with *senderType* 'O')
- The route of the order to the foreign market (Order Route event)
- The outcome of the order (Order Fulfillment event)

While Broker 1 may also optionally report this activity to CAT, it does not have a CAT reporting obligation in accordance with FAQ I7.

Broker 2 may populate a *senderType* value of 'O' on its Order Accepted event from Broker 1. When *senderType* 'O' is populated, linkage will be attempted on the Order Accepted event. After linkage is attempted, if no link is found, the firm will not receive an unlinked error.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 accepts the customer order	*NA*	Broker 1 knows that the order was executed and trade reported on a foreign market and does not have an obligation to report this activity to CAT.
3	Broker 1 routes the customer order to Broker 2	*NA*	Broker 1 knows that the order was executed and trade reported on a foreign market and does not have an obligation to report this activity to CAT.
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:	Since Broker 2 knows that the order was executed and trade reported on a foreign market, it does not have an obligation to report this activity to CAT. If they choose to optionally report the order, to avoid an interfirm linkage error, they should report the *senderType* 'O'. When *senderType* 'O' is populated,

#	Step	Reported Event	Comments
		20180501T153036.234556 manualFlag: true electronicDupFlag: false electronicTimestamp: receiverIMID: 456:BRKB senderIMID: 123:BRKA senderType: O routedOrderID: XYZ123555 affiliateFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: FOR isoInd: NA handlingInstructions: DIR custDspIntrFlag: false	linkage will be attempted on the Order Accepted event. After linkage is attempted, if no link is found, the firm will not receive an unlinked error.
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: 20180501T153036.234556 manualFlag: false senderIMID: destination: destinationType: N routedOrderID: side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180501 tradingSession: FOR affiliateFlag: true isoInd: NA	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.
6	Non-reporting Foreign Broker-Dealer accepts and executes the order	*NA*	
7	Broker 2 reports an Order Fulfillment event	*Broker 2 reports an **Order Fulfillment event***	The *fulfillmentLinkType* must be populated with a value of 'FOR' to

#	Step	Reported Event	Comments

	to show the outcome of the customer order	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
			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.

2.10. 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.
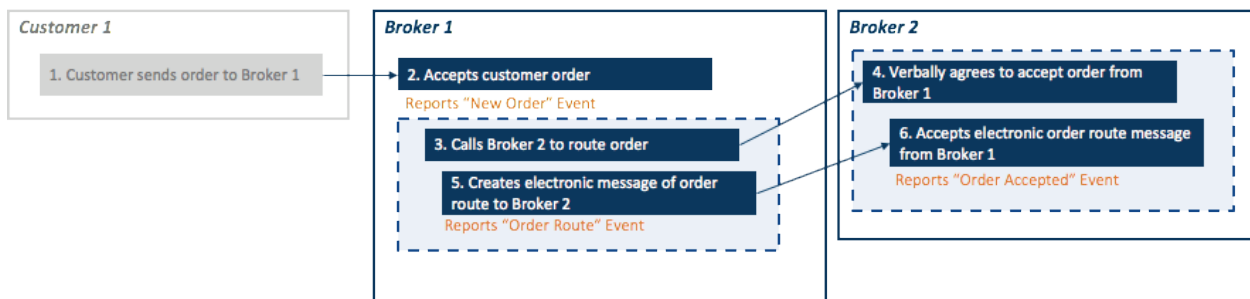
Industry Member Broker 1 is required to report:

- 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 Accepted 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 customer order	*Broker 1 reports a **New 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	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

#	Step	Reported Event	Comments
		electronicDupFlag: false electronicTimestamp: 20180417T143040.123456 senderIMID: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: RT5678 side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	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: O34567 symbol: XYZ eventTimestamp: 20180417T143036 manualFlag: true electronicDupFlag: false electronicTimestamp: 20180417T143040.126456 receiverIMID: 456:FRMB senderIMID: 123: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 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.
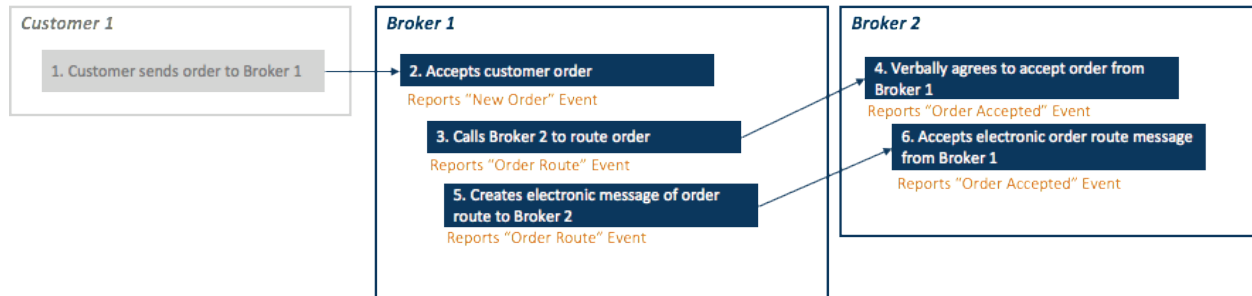
Industry Member Broker 1 is required to report:

- 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.

Industry Members are required to populate the *manualOrderID* field on the electronic duplicate event identifying the *orderID* of the related manual order. 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*	

#	Step	Reported Event	Comments
2	Broker 1 accepts the customer order	*Broker 1 reports a **New 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	*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: 123:FRMA destination: 456: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.

#	Step	Reported Event	Comments
4	Broker 2 verbally accepts order	*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: 456:FRMB senderIMID: 123: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	*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.
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: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: RT5678 side: B price: 9.99 quantity: 1000 orderType: LMT	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.

#	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: O34567FIX symbol: XYZ eventTimestamp: 20180417T143040.126456 manualFlag: false electronicDupFlag: true electronicTimestamp: receiverIMID: 456:FRMB senderIMID: 123: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 *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. The Industry Member must capture the *manualOrderID* (O34567E) to reference the manual order that was previously reported. The *manualOrderKeyDate* must also be populated.

2.10.3. Manual Order, One Side Reports Merged Event

This scenario illustrates the 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.
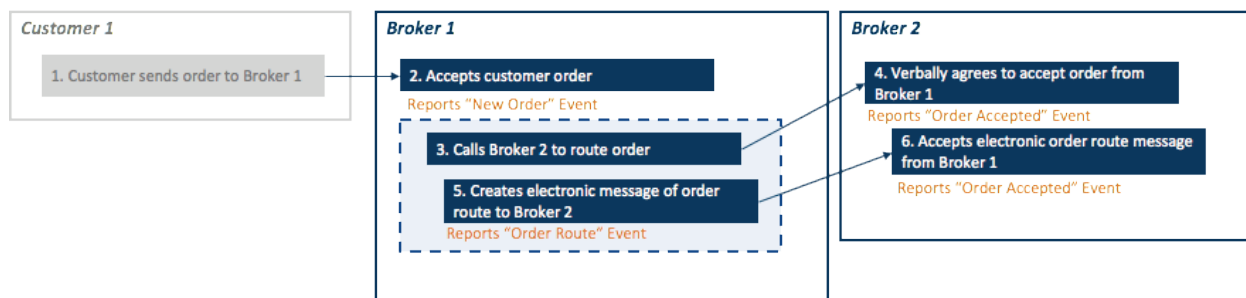
Industry Member Broker 1 is required to report:

- 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.

Broker 2 is required to populate the *manualOrderID* field on electronic duplicate events identifying the *orderID* of the related manual order. 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: 456:FRMB senderIMID: 123:FRMA senderType: F routedOrderID: affiliateFlag: false deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA	*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
		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: 123:FRMA destination: 456: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: 456:FRMB senderIMID: 123:FRMA senderType: F routedOrderID: RT5678 manualOrderKeyDate: 20180417T000000 manualOrderID: O34567E affiliateFlag: false	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. The Industry Member must capture the *manualOrderID* (O34567E) to

#	Step	Reported Event	Comments
		deptType: A side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	reference the manual order that was previously reported. The *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.
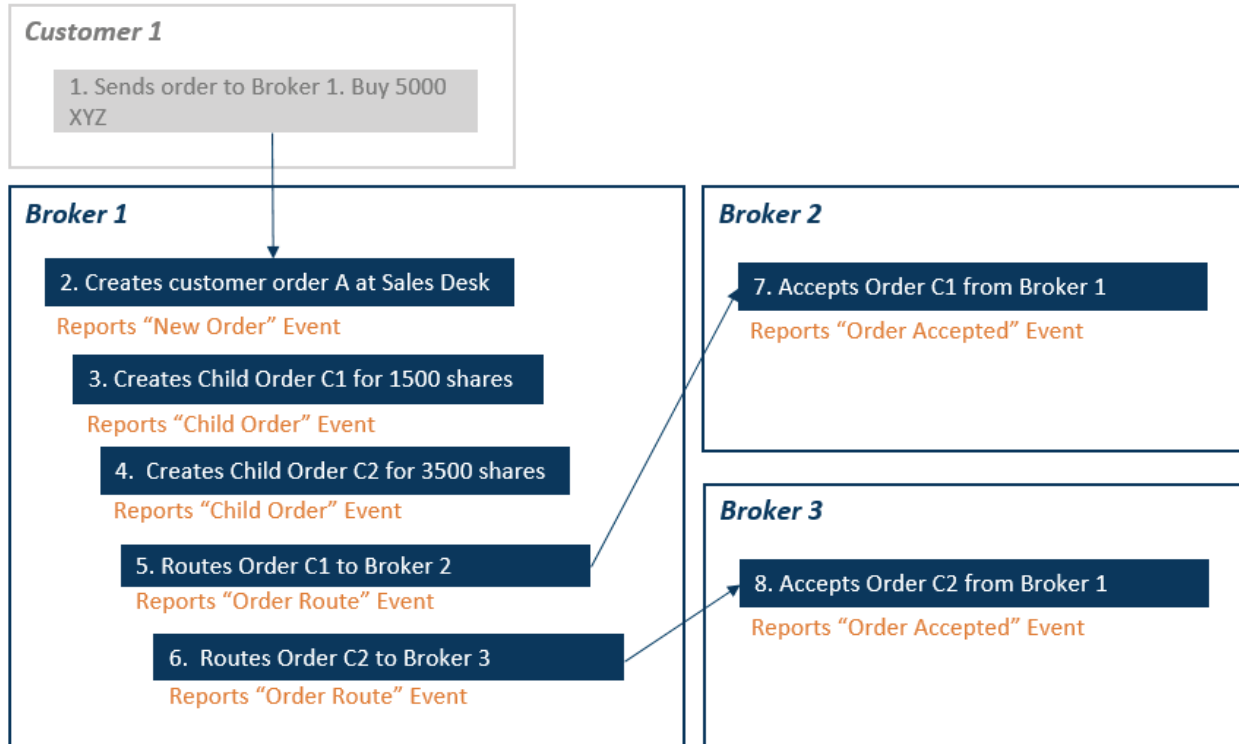
Industry Member Broker 1 is required to report:

- 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	

#	Step	Reported Event	Comments
		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.
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.

#	Step	Reported Event	Comments
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: 123:BRKR1 destination: 456: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 orderKeyDate: 20180424T000000 orderID: C22345 symbol: XYZ eventTimestamp: 20180424T113018.343457 manualFlag: false senderIMID: 123:BRKR1 destination: 789:FRM3 destinationType: F routedOrderID: RTC2 side: B price: 10.00 quantity: 3500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false isoInd: NA	

#	Step	Reported Event	Comments
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: 456:FRM2 senderIMID: 123: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 orderKeyDate: 20180424T000000 orderID: O3A1B2C symbol: XYZ eventTimestamp: 20180424T113018.543458 manualFlag: false receiverIMID: 789:FRM3 senderIMID: 123: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	

#	Step	Reported Event	Comments
		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.
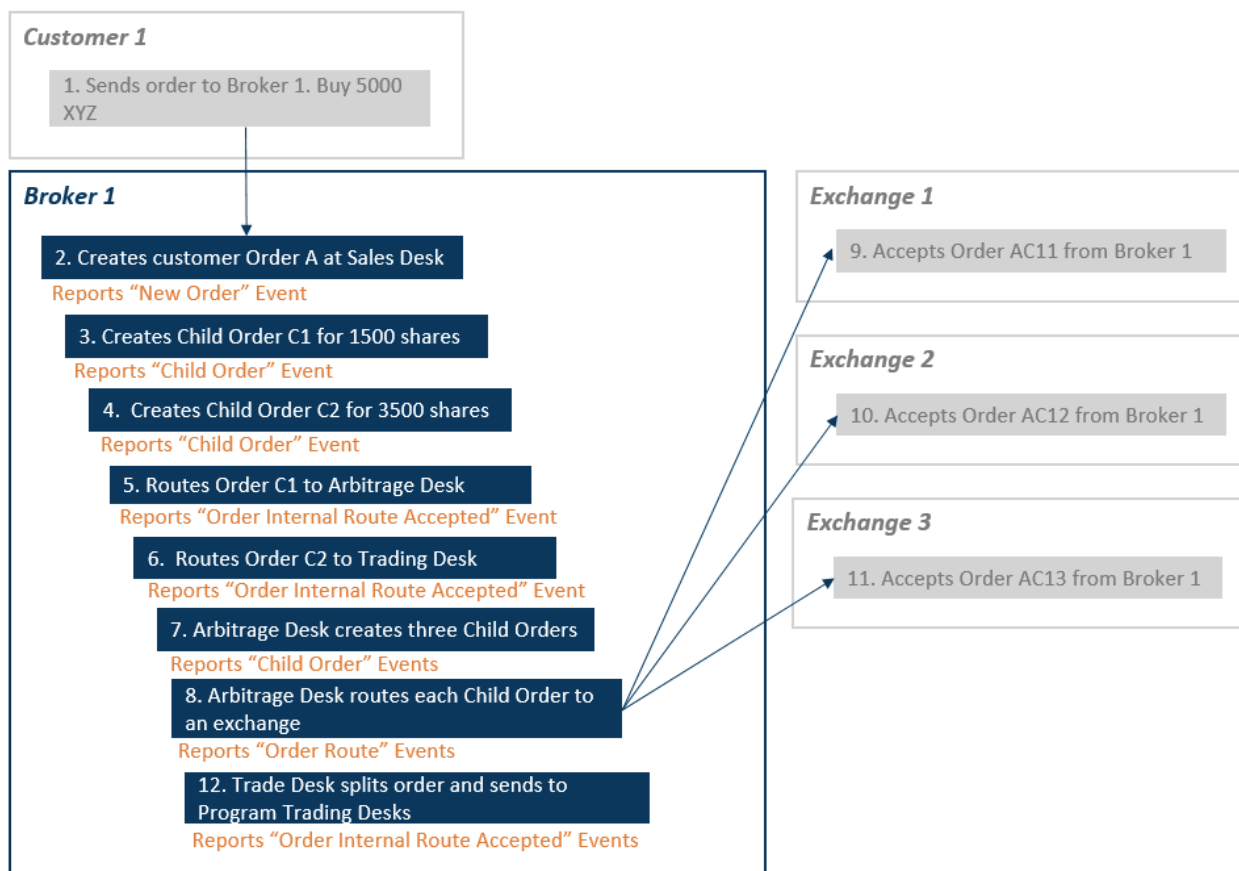
Industry Member Broker 1 must report the following for each desk:

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

- The generation of each child order (Child Order events)
- The route of each child order (Order Route event)
  - At the Trading Desk:
    - The receipt of the internal route from the Sales Desk (Order Internal Route Accepted event)
  - At the Program Trading desk:
    - 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 symbol: XYZ parentOrderKeyDate: 20180424T000000 parentOrderID: O11235 eventTimestamp: 20180424T113018.323456 side: B	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 links the Child Order events with the New Order event.

#	Step	Reported Event	Comments
		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	
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 timeInForce: DAY=20180424 tradingSession: REG	Broker 1 does not assign a new *orderID* to the Order Internal Route Accepted event.
6	Child Order 2 is internally routed to the Trading Desk	*Broker 1 reports an **Order Internal Route Accepted event*** type: MEIR	Broker 1 does not assign a new *orderID* to the Order Internal Route Accepted event.

#	Step	Reported Event	Comments
		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=20180424 tradingSession: REG	
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 orderID: AC122345 symbol: XYZ parentOrderKeyDate: 20180424T000000 parentOrderID: C12345 eventTimestamp: 20180424T113018.324657 side: B price: 10.00 quantity: 500	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
		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: 123:BRKR1 destination: EXCH1 destinationType: E routedOrderID: RTAC11 session: s5 side: B price: 10.00 quantity: 400 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false isoInd: NA	

#	Step	Reported Event	Comments
		*Broker 1 reports an **Order Route** event (2 of 3)* type: MEOR orderKeyDate: 20180424T000000 orderID: AC122345 symbol: XYZ eventTimestamp: 20180424T113018.325657 manualFlag: false senderIMID: 123: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: 123:BRKR1 destination: EXCH3 destinationType: E routedOrderID: RTAC13 session: s7 side: B price: 10.00 quantity: 600 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false isoInd: NA	

#	Step	Reported Event	Comments
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 price: 10.00 quantity: 1500 orderType: LMT timeInForce: DAY=20170801 tradingSession: REG	Broker 1 does not assign a new *orderID* to the Order Internal Route Accepted event.

2.11.3. Industry Member Creates Child Orders Then Cancels the Parent order

This scenario illustrates the CAT reporting requirements when an Industry Member originates a proprietary order and splits the order into multiple child orders. The Industry Member then decides to cancel the parent order. While the Industry Member is required to report an Order Cancelled event reflecting the cancellation of the parent order, the Industry Member is also required to report a Child Order Cancelled event for each related Child Order.
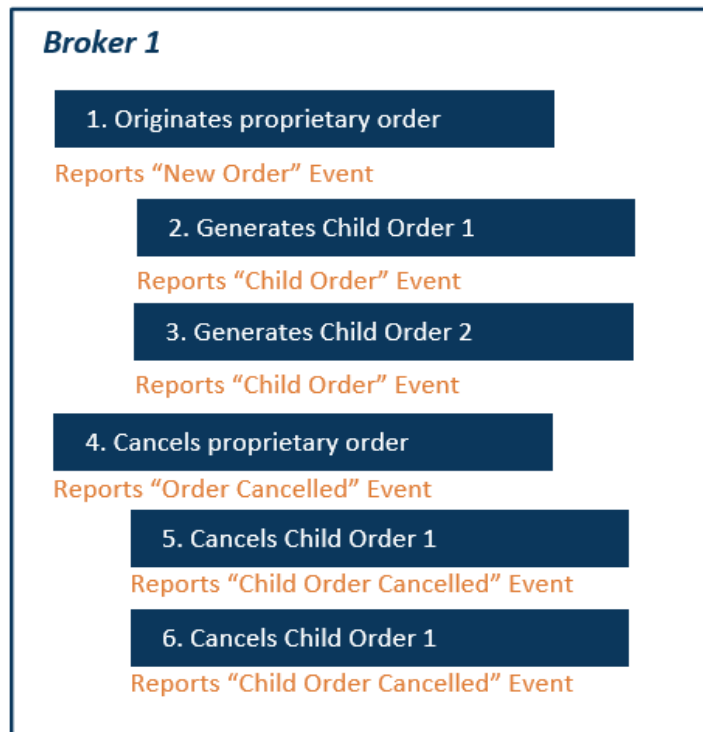
Industry Member Broker 1 is required to report:

- The origination of the proprietary order (New Order event)
- The generation of each child order (Child Order events)
- The cancellation of the parent order (Order Cancelled event)
- The cancellation of each child order (Child Order Cancelled event)

#	Step	Reported Event	Comments
1	Broker 1 originates a proprietary order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180424T000000 orderID: O11235 symbol: XYZ	

| #	Step	Reported Event	Comments
		eventTimestamp: 20180424T113018.123456 manualFlag: false deptType: T side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ID09876 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Broker 1 generates two child orders from the proprietary 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.
3	Broker 1 generates two child orders from the proprietary 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	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.

#	Step	Reported Event	Comments
		side: B price: 10.00 quantity: 3500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG	
4	Broker 1 cancels the parent order	*Broker 1 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20180424T000000 orderID: O11235 symbol: XYZ eventTimestamp: 20180424T113019.323457 manualFlag: false cancelQty: 5000 leavesQty: 0 initiator: F	
5	Broker 1 cancels the child orders. Order 1 of 2, C12345 for 1500.	*Broker 1 reports a **Child Order Cancelled event*** type: MECOC orderKeyDate: 20180424T000000 orderID: C12345 symbol: XYZ eventTimestamp: 20180424T113019.423457 manualFlag: false cancelQty: 1500 leavesQty: 0	Broker 1 is required to report the cancellation of each child order. Based on the firm's order handling practice and system configuration, the *eventTimestamp* on the MECOC may be different than or prior to the *eventTimestamp* in the MECO.
6	Broker 1 cancels the child orders Order 2 of 2, C22345 for 3500	*Broker 1 reports a **Child Order Cancelled event*** type: MECOC orderKeyDate: 20180424T000000 orderID: C22345 symbol: XYZ eventTimestamp: 20180424T113019.423457 manualFlag: false cancelQty: 3500 leavesQty: 0	Broker 1 is required to report the cancellation of each child order. Based on the firm's order handling practice and system configuration, the *eventTimestamp* on the MECOC may be different than or prior to the *eventTimestamp* in the MECO.

2.11.4. Industry Member Generates a Representative Order then Creates Child Orders

This scenario illustrates the CAT reporting requirements when an Industry Member receives a customer order, and then generates a representative order to facilitate the execution of the customer order. The Industry Member then generates multiple child orders off the representative order, which are routed to the exchange. The customer order is filled on a print for print basis as executions occur against the representative child orders on the exchange. Upon receipt of each fill, an Order Fulfillment event is reported for the customer order. The *firmDetails* on the Order Fulfillment events should reflect the *orderID* of the representative order.
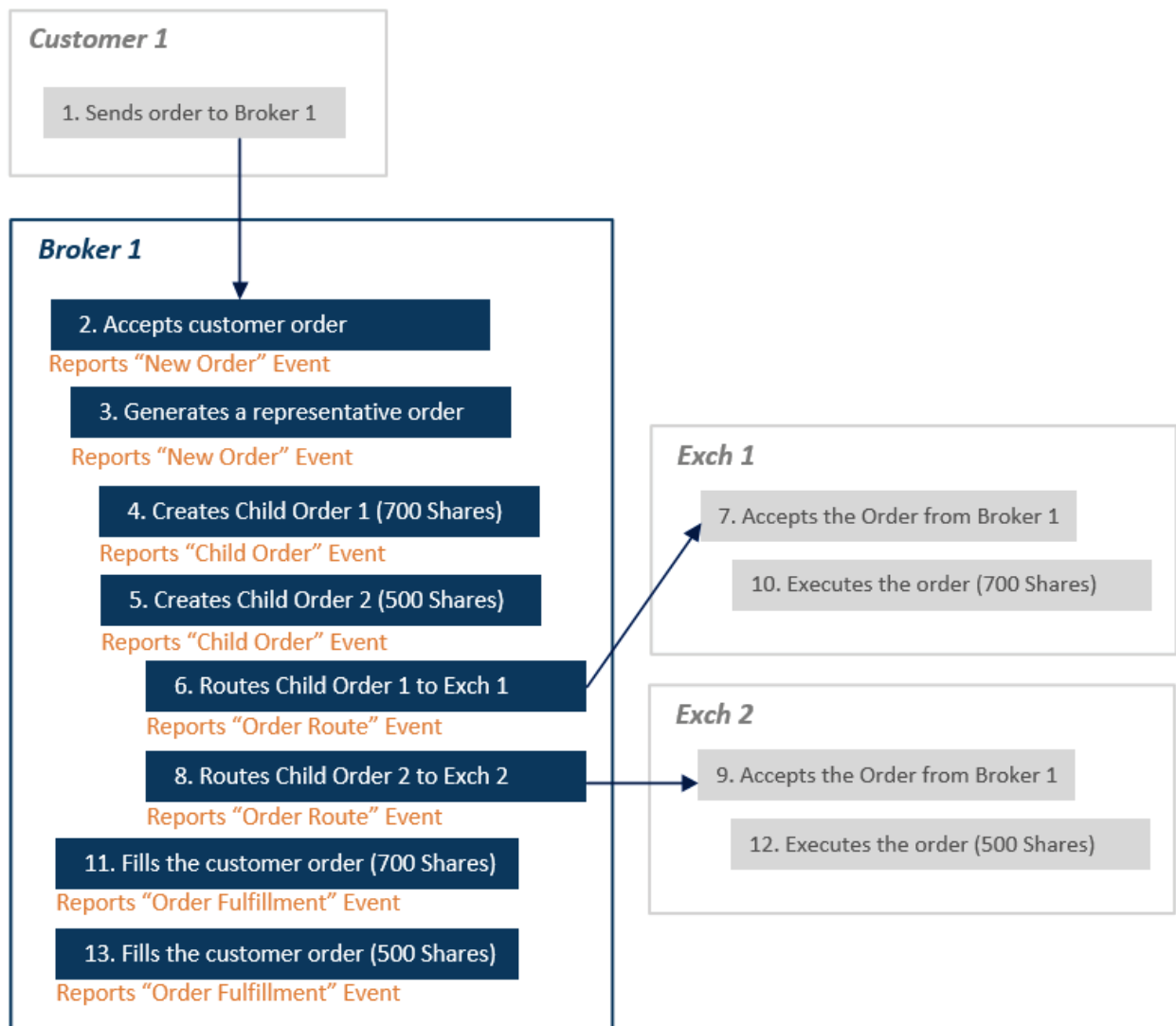
Industry Member Broker 1 is required to report:

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

- The generation of the representative order (New Order event)

- The creation of each child order for (Child Order events)

- The route of each child order to the exchange (Order Route events)

- The fill of the original customer order on a print for print basis (Order Fulfillment events)

#	Step	Reported Event	Comments
1	Broker 1 receives a customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180424T000000 orderID: O11235 symbol: XYZ eventTimestamp: 20180424T113018.123456 manualFlag: false deptType: T side: B price: 10.00 quantity: 1200 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUS9876 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Broker 1 generates a representative order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180424T000000 orderID: R21235 symbol: XYZ eventTimestamp: 20180424T113019.123456 manualFlag: false deptType: T side: B price: 10.00 quantity: 1200 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG	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. The *aggregatedOrders* field must be populated.

#	Step	Reported Event	Comments
		custDspIntrFlag: false firmDesignatedID: RP123 accountHolderType: P affiliateFlag: false aggregatedOrders: O11235@20180424T000000@@ negotiatedTradeFlag: false representativeInd: Y	
3	Broker 1 generates two child orders from the representative order. Order 1 of 2, C12345 for 700.	*Broker 1 reports a **Child Order event*** type: MECO orderKeyDate: 20180424T000000 orderID: C12345 symbol: XYZ parentOrderKeyDate: 20180424T000000 parentOrderID: R21235 eventTimestamp: 20180424T113019.323456 side: B price: 10.00 quantity: 700 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* R21235 must be populated in the *parentOrderID* field. The Parent Order Key links the Child Order event with the New Order event.
4	Broker 1 generates two child orders from the proprietary order. Order 2 of 2, C22345 for 500	*Broker 1 reports a **Child Order event*** type: MECO orderKeyDate: 20180424T000000 orderID: C22345 symbol: XYZ parentOrderKeyDate: 20180424T000000 parentOrderID: R21235 eventTimestamp: 20180424T113019.323457 side: B price: 10.00 quantity: 500 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* R21235 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
5	Broker 1 routes child order 1 to Exchange 1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180424T000000 orderID: C12345 symbol: XYZ eventTimestamp: 20180424T113019.623457 manualFlag: false senderIMID: 123:BRKR1 destination: EXCH1 destinationType: E routedOrderID: RTAC11 session: s5 side: B price: 10.00 quantity: 700 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false isoInd: NA	
6	Exchange 1 accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	
7	Broker 1 routes child order 2 to Exchange 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180424T000000 orderID: C22345 symbol: XYZ eventTimestamp: 20180424T113019.623457 manualFlag: false senderIMID: 123:BRKR1 destination: EXCH3 destinationType: E routedOrderID: RTAC13 session: s7 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false	

#	Step	Reported Event	Comments
		isoInd: NA	
8	Exchange 2 accepts the order from Broker 1	*EXCH2 reports a Participant **Order Accepted event***	
9	Exchange 1 executes the order from Broker 1	*EXCH1 reports a Participant **Order Trade event***	
10	Broker 1 fills the customer order print for print	*Broker 1 reports an **Order Fulfillment event*** Type: MEOF fillKeyDate: 20180424T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20180424T113020.623457 manualFlag: false fulfillmentLinkType: Y quantity: 700 price: 10.00 capacity: R clientDetails: orderKeyDate: 20180424T000000 orderID: O11235 side: B firmDetails: orderKeyDate: 20180424T000000 orderID: R21235 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. *firmDetails* are required and must be populated with the *orderID* of the representative order.
11	Exchange 2 executes the order from Broker 1	*EXCH2 reports a Participant **Order Trade event***	
12	Broker 1 fills the customer order print for print	*Broker 1 reports an **Order Fulfillment event*** Type: MEOF fillKeyDate: 20180424T000000 fulfillmentID: FO12355 symbol: XYZ eventTimestamp: 20180424T113021.623457 manualFlag: false fulfillmentLinkType: Y quantity: 500 price: 10.00 capacity: R	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. *firmDetails* are required and must be populated with the *orderID* of the representative order.

#	Step	Reported Event	Comments
		clientDetails: orderKeyDate: 20180424T000000 orderID: O11235 side: B firmDetails: orderKeyDate: 20180424T000000 orderID: R21235 side: SL	

2.11.5. Industry Member a Creates Child Order Then Generates a Representative Order

This scenario illustrates the CAT reporting requirements when an Industry Member receives a customer order, and then generates child orders to work the customer order. The Industry Member then generates a representative order to facilitate the execution of each child order, which are routed to an exchange for execution. The customer order is filled on a print for print basis. Based on Broker 1's order handling practices and system architecture, the firm may populate either the orderID of the parent order or the related child order in the *clientDetails*.

Industry Member Broker 1 is required to report:

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

- The creation of each child order (Child Order events)

- The generation of each representative order (New Order events)

- The route of each representative order to the exchange (Order Route events)

- The fill of the customer order (Order Fulfillment events)

#	Step	Reported Event	Comments
1	Broker 1 receives a customer order	*Broker 1 reports a **New Order event*** type: MENO	

#	Step	Reported Event	Comments
		orderKeyDate: 20180424T000000 orderID: O11235 symbol: XYZ eventTimestamp: 20180424T113018.123456 manualFlag: false deptType: T side: B price: 10.00 quantity: 1200 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUS9876 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Broker 1 generates two child orders from the customer order. Order 1 of 2, C12345 for 700.	*Broker 1 reports a **Child Order event*** type: MECO orderKeyDate: 20180424T000000 orderID: C12345 symbol: XYZ parentOrderKeyDate: 20180424T000000 parentOrderID: O11235 eventTimestamp: 20180424T113019.323456 side: B price: 10.00 quantity: 700 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.
3	Broker 1 generates two child orders from the proprietary order. Order 2 of 2, C22345 for 500	*Broker 1 reports a **Child Order event*** type: MECO orderKeyDate: 20180424T000000 orderID: C22345 symbol: XYZ parentOrderKeyDate: 20180424T000000 parentOrderID: O11235 eventTimestamp: 20180424T113019.323457 side: B price: 10.00 quantity: 500	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.

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20180424 tradingSession: REG	
4	Broker 1 generates a representative order for child order 1	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180424T000000 orderID: R21235 symbol: XYZ eventTimestamp: 20180424T113020.123456 manualFlag: false deptType: T side: B price: 10.00 quantity: 700 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG custDspIntrFlag: false firmDesignatedID: RP123 accountHolderType: P affiliateFlag: false aggregatedOrders: C12345@20180424T000000@@ 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. The *aggregatedOrders* field must be populated.
5	Broker 1 generates a representative order for child order 2	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180424T000000 orderID: R21236 symbol: XYZ eventTimestamp: 20180424T113020.123456 manualFlag: false deptType: T side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG custDspIntrFlag: false firmDesignatedID: RP123 accountHolderType: P affiliateFlag: false aggregatedOrders: C22345@20180424T000000@@	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. The *aggregatedOrders* field must be populated.

#	Step	Reported Event	Comments
		negotiatedTradeFlag: false representativeInd: Y	
6	Broker 1 routes representative order 1 to Exchange 1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180424T000000 orderID: R21235 symbol: XYZ eventTimestamp: 20180424T113020.623457 manualFlag: false senderIMID: 123:BRKR1 destination: EXCH1 destinationType: E routedOrderID: RTAC11 session: s5 side: B price: 10.00 quantity: 700 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false isoInd: NA	
7	Exchange 1 accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	
8	Broker 1 routes representative order 2 to Exchange 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180424T000000 orderID: R21236 symbol: XYZ eventTimestamp: 20180424T113020.623457 manualFlag: false senderIMID: 123:BRKR1 destination: EXCH3 destinationType: E routedOrderID: RTAC13 session: s7 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false	

#	Step	Reported Event		Comments
		isoInd: NA		
9	Exchange 2 accepts the order from Broker 1	*EXCH2 reports a Participant **Order Accepted event***		
10	Exchange 1 executes the order from Broker 1	*EXCH1 reports a Participant **Order Trade event***		
11	Broker 1 fills the customer print for print	**Option 1** *Broker 1 reports an **Order Fulfillment event** linking to the original customer order* Type: MEOF fillKeyDate: 20180424T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20180424T113021.623457 manualFlag: false fulfillmentLinkType: Y quantity: 700 price: 10.00 capacity: R clientDetails: orderKeyDate: 20180424T000000 orderID: O11235 side: B firmDetails: orderKeyDate: 20180424T000000 orderID: R21235 side: SL	**Option 2** *Broker 1 reports an **Order Fulfillment event** linking to the related child order* Type: MEOF fillKeyDate: 20180424T000000 fulfillmentID: FO12350 symbol: XYZ eventTimestamp: 20180424T113021.623457 manualFlag: false fulfillmentLinkType: Y quantity: 700 price: 10.00 capacity: R clientDetails: orderKeyDate: 20180424T000000 orderID: C12345 side: B firmDetails: orderKeyDate: 20180424T000000 orderID: R21235 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. *firmDetails* are required. Based on Broker 1's order handling practices and system architecture, the firm may populate either the *orderID* of the parent order or the related child order in the *clientDetails.*
12	Exchange 2 executes the order from Broker 1	*EXCH2 reports a Participant **Order Trade event***		
13	Broker 1 fills the customer order print for print	**Option 1** *Broker 1 reports an **Order Fulfillment event** linking to the original customer order*	**Option 2** *Broker 1 reports an **Order Fulfillment event** linking to the related child order*	The *fulfillmentLinkType* field must be populated with a value of 'Y' to indicate that the order is a representative order, and that explicit linkage

#	Step	Reported Event		Comments
		Type: MEOF fillKeyDate: 20180424T000000 fulfillmentID: FO12355 symbol: XYZ eventTimestamp: 20180424T113022.623457 manualFlag: false fulfillmentLinkType: Y quantity: 500 price: 10.00 capacity: R clientDetails: orderKeyDate: 20180424T000000 orderID: O11235 side: B firmDetails: orderKeyDate: 20180424T000000 orderID: R21236 side: SL	Type: MEOF fillKeyDate: 20180424T000000 fulfillmentID: FO12355 symbol: XYZ eventTimestamp: 20180424T113022.623457 manualFlag: false fulfillmentLinkType: Y quantity: 500 price: 10.00 capacity: R clientDetails: orderKeyDate: 20180424T000000 orderID: C22345 side: B firmDetails: orderKeyDate: 20180424T000000 orderID: R21236 side: SL	is required. *firmDetails* are required. Based on Broker 1's order handling practices and system architecture, the firm may populate either the *orderID* of the parent order or the related child order in the *clientDetails*.

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.

Since the cancellation was initiated by the exchange, Broker 1 is not required to report a Route Cancelled event. 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)

Industry Members are required to capture the *eventTimestamp* in Order Cancelled events reflecting the time the order was cancelled (e.g., the time that the order was confirmed to be cancelled in the firm's OMS/EMS). In this example, the *eventTimestamp* reflects the time that Broker 1 cancelled the order on its books and records after receiving the exchange cancellation. Broker 1 is not required to report a receipt time, as the order was not a customer order, and no request was received.

#	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	

#	Step	Reported Event	Comments
		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 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.534456 manualFlag: false senderIMID: 123: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	The route is cancelled on Broker 1's books and records	N/A	Since the cancellation was initiated by the exchange, Broker 1 is not required to report a Route Cancelled event.
6	Broker 1 cancels the	*Broker 1 reports an **Order Cancelled event***	The *requestTimestamp* field must remain blank, as no request was

#	Step	Reported Event	Comments
	proprietary order	type: MEOC orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143036.534456 manualFlag: false cancelQty: 1000 leavesQty: 0 initiator: F requestTimestamp:	received to cancel the order.

Option 2:

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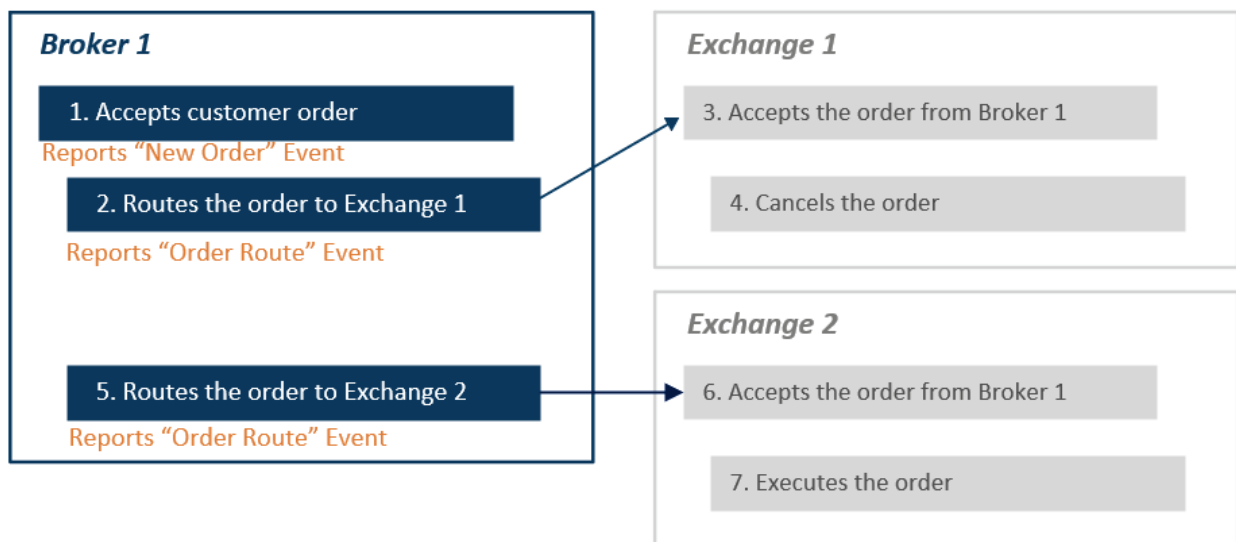
Industry Member Broker 1 is required to report:

- 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)

Industry Members are required to capture the *eventTimestamp* in Order Modified events reflecting the time the order was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). In this example, the *eventTimestamp* reflects the time that Broker 1 modified the order on its

books and records after receiving the exchange cancellation. Broker 1 is not be required to report a receipt time, as the order was not a customer order, and no request was received.

#	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 Exchange 1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.534456 manualFlag: false senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: SESS-1 side: B price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG	

#	Step	Reported Event	Comments
		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	The route is cancelled on Broker 1's books and records	*N/A*	Since the cancellation was initiated by the exchange, Broker 1 is not required to report a Route Cancelled event.
6	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 price: 10.02 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY=20170417 tradingSession: REG custDspIntrFlag: false	
7	Broker 1 routes the order to Exchange 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp:	

#	Step	Reported Event	Comments
		20180417T143036.534456 manualFlag: false senderIMID: 123: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:	
8	Exch 2 accepts the order from Broker 1	*Exch 2 reports a Participant **Order Accepted event***	
9	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 attempts to cancel 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 requests to cancel the order, but the order was fully executed before the cancellation was requested by Broker 1.
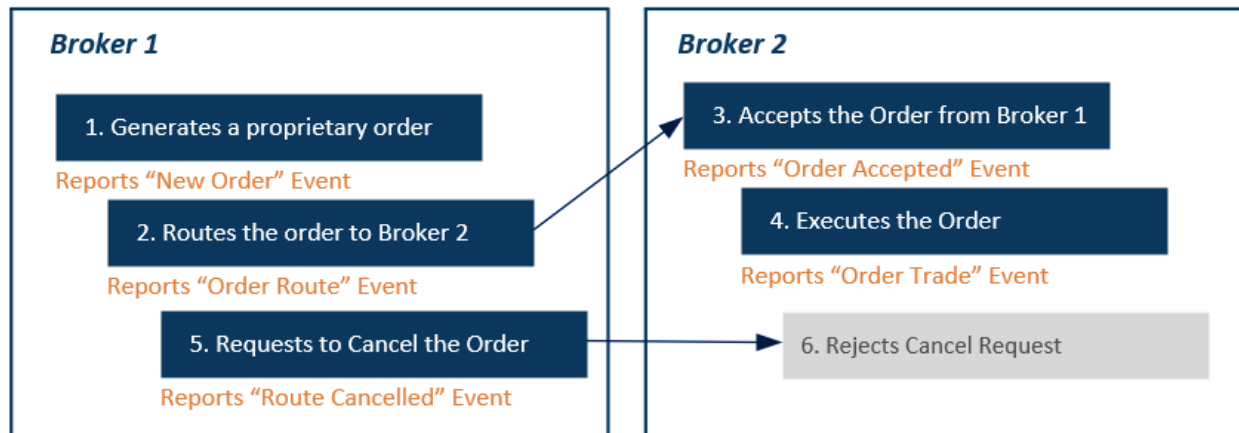
Industry Member Broker 1 is required to report:

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

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

- Cancellation of the route to Broker 2 (Route Cancelled 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)

In accordance with CAT FAQ B42, Broker 2 is not required to report an Order Cancel Request event in Phase 2d, since the request was received after the order was fully executed. However, this activity may be required in future phases of CAT. If Broker 2 choses to optionally report an Order Cancel Request event, it will not be rejected by CAT in accordance with CAT FAQ P14.

#	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	

#	Step	Reported Event	Comments
		custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: P 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: 123:FRMA destination: 456: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: 456:FRMB senderIMID: 123:FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: false deptType: T	

#	Step	Reported Event	Comments
		side: B price: 9.99 quantity: 1000 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 requests that Broker 2 cancel the order after the order has been executed	*Broker 1 reports a **Route Cancelled event*** type: MECR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143037.344567 manualFlag: false cancelQty: 1000 senderIMID: 123:FRMA	In its Route Cancelled Event, Broker 1 must populate the *routeRejectedFlag* field with a value of 'true'. Alternately, if the route rejection is not known at the time of submission of the Route Cancelled Event, Broker 1 must submit an Order Route Cancelled Supplement (MECRS) event with the *routeRejectedFlag* field populated with a value of 'true'.

#	Step	Reported Event	Comments
		destination: 456:FRMB destinationType: F routedOrderID: XYZO555 routeRejectedFlag: true	
6	Broker 2 rejects the cancellation instruction from Broker 1	*NA*	Broker 2 is not required to report an Order Cancel Request event since the order has already been fully executed.

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.
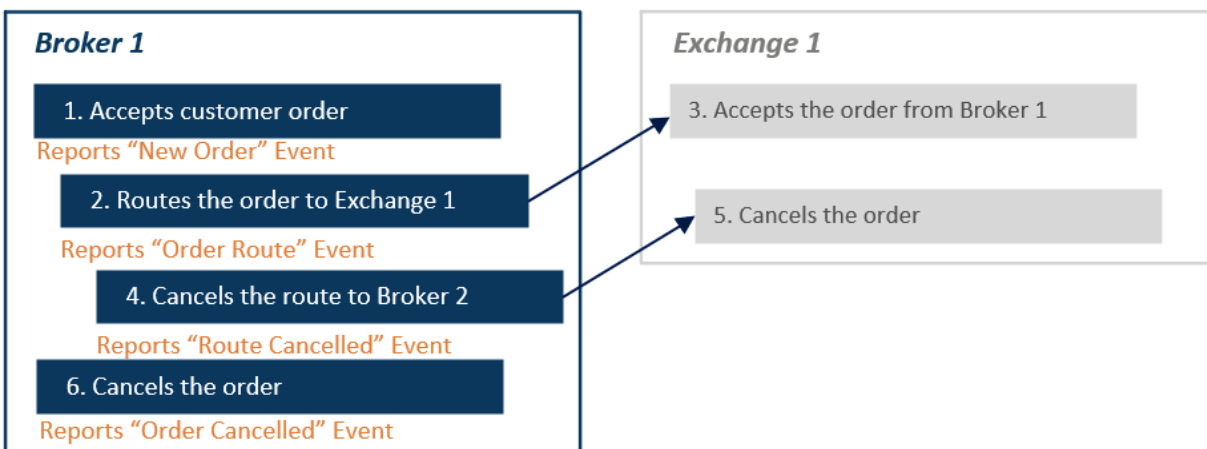
Industry Member Broker 1 is required to report:

- 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)
- The cancellation of the route (Route 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	

#	Step	Reported Event	Comments
		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 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: 123: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	The *requestTimestamp* field must remain blank, as no request was received to cancel the order.

#	Step	Reported Event	Comments
		orderID: O56575 symbol: XYZ eventTimestamp: 20180417T150345.123456 manualFlag: false cancelQty: 1000 leavesQty: 0 initiator: F requestTimestamp:	
5	Broker 1 cancels the route to the exchange	*Broker 1 reports a **Route Cancelled event*** type: MECR orderKeyDate: 20180417T000000 orderID: O56575 symbol: XYZ eventTimestamp: 20180417T150345.123456 manualFlag: false cancelQty: 1000 senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: RO56575XYZ session: SESS1	
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 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	

#	Step	Reported Event	Comments
		orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.334456 manualFlag: false senderIMID: 123:FRMA destination: 456: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: 456:FRMB senderIMID: 123: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 custDspIntrFlag: false	
5	The clearing firm executes the order	*Clearing firm reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TO3A1B2C	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.

#	Step	Reported Event	Comments
		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: P	

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.
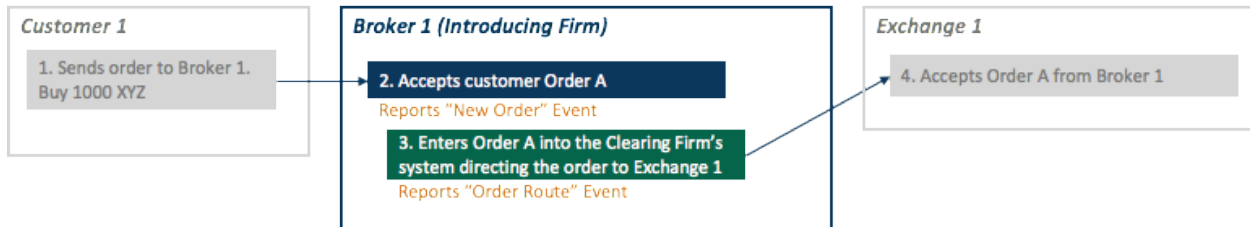
Introducing Firm Broker 1 is required to report:

- 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 symbol: XYZ eventTimestamp: 20180417T153036.234456 manualFlag: false senderIMID: 123: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	

#	Step	Reported Event	Comments
		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	

| #	Step	Reported Event	Comments
		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 senderIMID: 123:FRMA destination: 456: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	

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180417T153036.334456 manualFlag: false receiverIMID: 456:FRMB senderIMID: 123: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 manualFlag: false senderIMID: 456: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. Fractional Share Scenarios

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 manualFlag: false deptType: T side: SL price: quantity: 100.5	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
		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: 456: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 account	Broker 1 reports a **Trade event** type: MEOT tradeKeyDate: 20180416T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180416T153035.434466	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
		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	

2.14.2. 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.
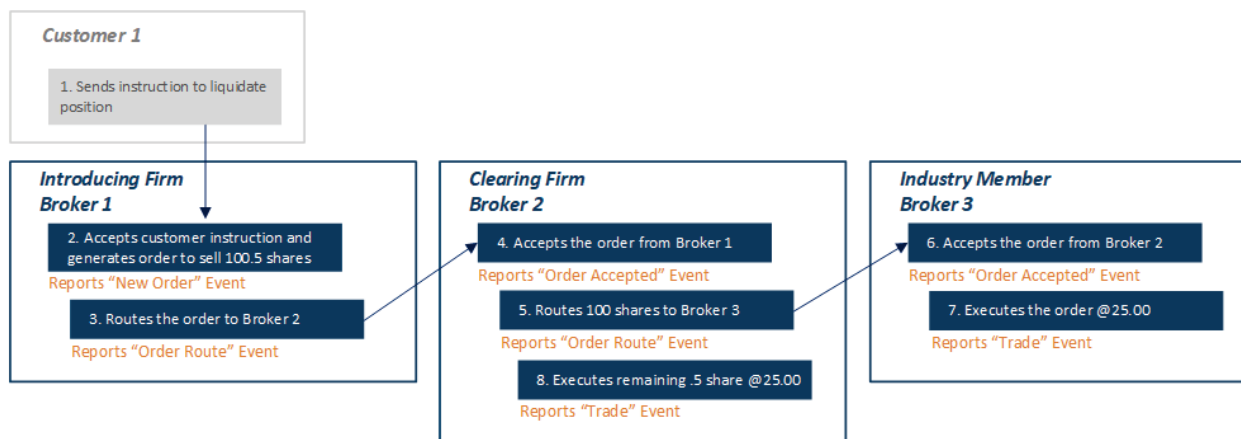
Introducing Firm Broker 1 is required to report:

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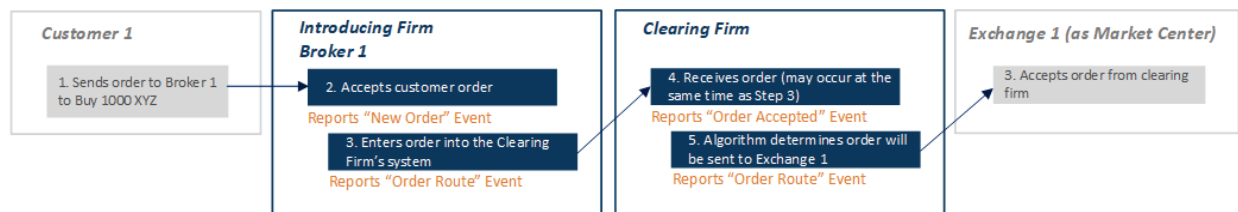- The route of the order to the clearing firm (Order Route event)

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 symbol: XYZ eventTimestamp: 20180416T153035.334466 manualFlag: false senderIMID: 123:FRMA	

#	Step	Reported Event	Comments
		destination: 456: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: 456:FRMB senderIMID: 123: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 symbol: XYZ eventTimestamp: 20180416T153035.554466 manualFlag: false senderIMID: 456:FRMB	

#	Step	Reported Event	Comments
		destination: 789: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: 789:FRMC senderIMID: 456: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 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180416T153035.764468 manualFlag: false	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
		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 orderID: 9876XYZ 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 9876XYZ.

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.
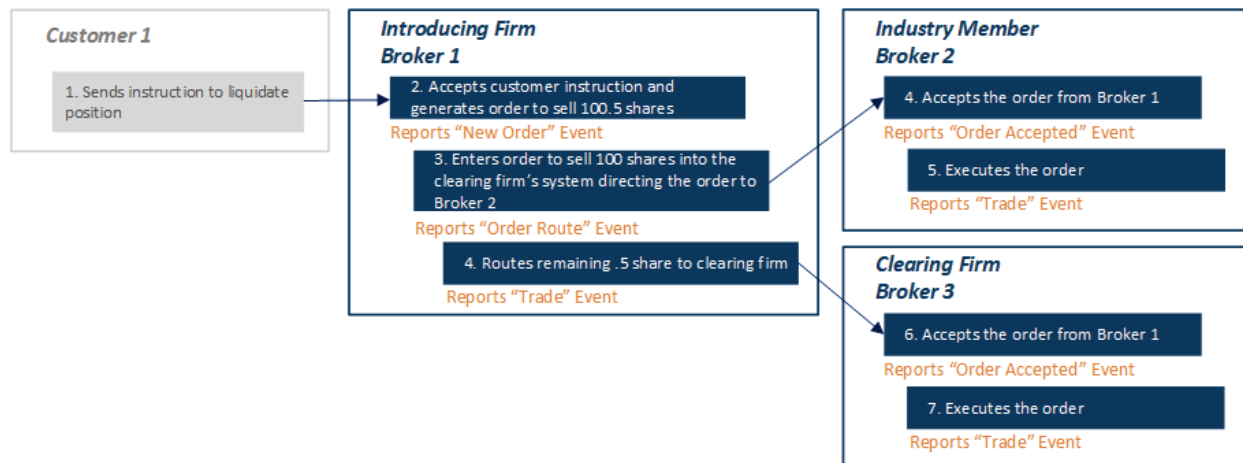
Introducing Firm Broker 1 is required to report:

- 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	Introducing firm Broker 1 reports a	Since the customer requested full liquidation of the position, Broker 1 is

#	Step	Reported Event	Comments
	instruction and generates an order to liquidate the position	***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	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: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: XYZO555 side: SL price: quantity: 100 orderType: MKT timeInForce: DAY=20180416 tradingSession: REG affiliateFlag: false isoInd: NA	
4	Industry Member Broker 2 accepts the order routed from introducing	Industry Member Broker 2 reports an ***Order Accepted event***	

#	Step	Reported Event	Comments
	firm Broker 1	type: MEOA orderKeyDate: 20180416T000000 orderID: 9876XYZ symbol: XYZ eventTimestamp: 20180416T153035.444467 manualFlag: false receiverIMID: 456:FRMB senderIMID: 123: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 firmDesignatedID: PROP123 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	
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: 123:FRMA destination: 456: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: 456:FRMC senderIMID: 123:FRMA senderType: F routedOrderID: XYZO556 affiliateFlag: false deptType: T side: SL price: quantity: 0.5 orderType: MKT timeInForce: DAY=20180416	

#	Step	Reported Event	Comments
		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.
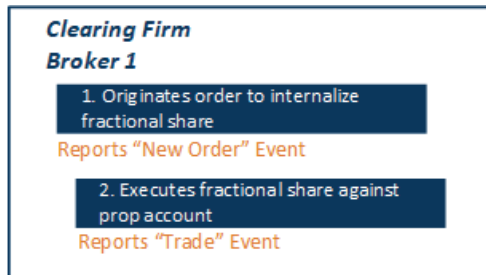
Clearing Firm Broker 1 is required to report:

- 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 eventTimestamp: 20180416T093000.400456 manualFlag: false	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
		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, or other similar programs such as Employee Stock Purchase Programs. 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.
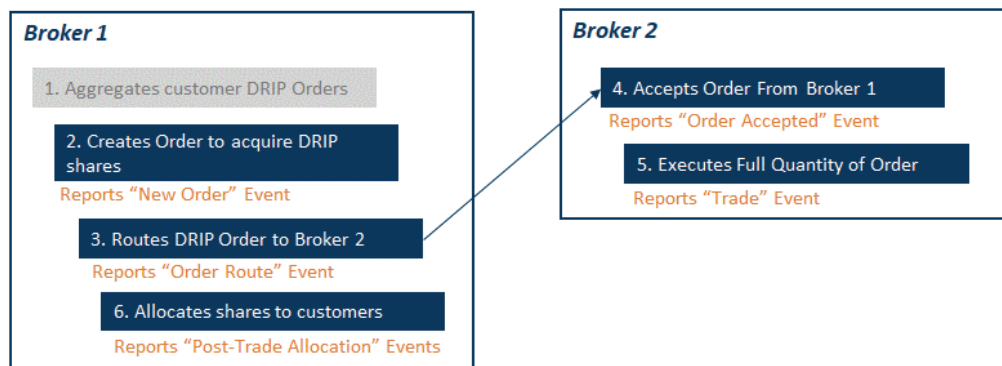
Industry Member Broker 1 is required to report:

- 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)

- The allocation of shares to the participating customers (Post-Trade Allocation events)

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 allocation of shares to Broker 1's original customers is reportable by the firm performing the allocation, which is generally the clearing or self-clearing firm processing the allocation. In this scenario, Broker 1 is a self-clearing firm and has the obligation to report the allocation events to CAT.

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.
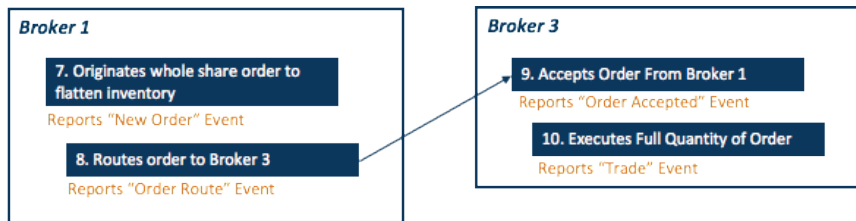
Industry Member Broker 1 is required to report:

- 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	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
		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	
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: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: OBB12345 side: B price: 10.00 quantity: 113 orderType: LMT timeInForce: DAY=20180424 tradingSession: REG affiliateFlag: false isoInd: N handlingInstructions: RAR	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: 456:FRMB	

#	Step	Reported Event	Comments
		senderIMID: 123:FRMA senderType: F 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	*Broker 1 reports **Post-Trade Allocation events*** type: MEPA allocationKeyDate: 20180427T000000	While Broker 1 may have allocated shares to numerous customers, only one allocation event is shown in this step for illustrative purposes. The *eventTimestamp* in the MEPA event represents the date/time that

#	Step	Reported Event	Comments
		allocationID: AL12345 symbol: XYZ eventTimestamp: 20180427T173005.535456 quantity: 4.25 price: 10.00 side: B firmDesignatedID: CUST1234 institutionFlag: false tradeDate: 20180427 settlementDate: 20180430 allocationType: CUS TIDType: SSN	the allocation was processed. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.
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: 123:FRMA	

#	Step	Reported Event	Comments
		destination: 789: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 eventTimestamp: 20180427T113015.135456 manualFlag: false receiverIMID: 789:BROKER3 senderIMID: 123: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:	

#	Step	Reported Event	Comments
		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. Stop and Conditional Order Scenarios

2.15.1. Stop Order

This scenario illustrates the CAT reporting requirements when a customer places a stop order, also referred to as a stop-loss order, with an Industry Member.

The customer places a GTC sell order and provides instructions to Industry Member Broker 1 specifying that, should the share price of XYZ fall below a predetermined level of $35.00 (i.e., the stop price), the order should become immediately executable as a market order. Broker 1 then routes the order to Industry Member Broker 2. Broker 2 is holding the order at the time the stop price is reached and the condition is triggered 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 with applicable *handlingInstructions*)
- 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 with applicable *handlingInstructions*)
- The time at which the stop price is hit, and the underlying condition of the order becomes effective (Order Effective event)
- The route of the customer order to the exchange (Order Route event)

If the order is received/originated or routed as a Stop order, the o*rderType* field must be populated with a value of 'MKT'. If the order is received/originated or routed as a Stop Limit order, the *orderType* must be populated with a value of 'LMT', and the *price* field must be populated. Refer to CAT FAQ B57 for additional information.

#	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: S price: quantity: 1000 orderType: MKT timeInForce: GTC tradingSession: REG handlingInstructions: STOP=35.00 custDspIntrFlag: false firmDesignatedID: IN004 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Broker 1 is required to report a *handlingInstructions* value of 'STOP' (Stop Price) paired with a value representing the predetermined stop price ($35.00).

#	Step	Reported Event	Comments
3	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ eventTimestamp: 20180417T143030.534456 manualFlag: false senderIMID: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: AO222 side: S price: quantity: 1000 orderType: MKT timeInForce: GTC tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: STOP=35.00	
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: 20180417T143030.534456 manualFlag: false receiverIMID: 456:FRMB senderIMID: 123:FRMA senderType: F routedOrderID: AO222 affiliateFlag: false deptType: A side: S price: quantity: 1000 orderType: MKT timeInForce: GTC tradingSession: REG isoInd: NA custDspIntrFlag: false handlingInstructions: STOP=35.00	
5	Broker 2 monitors market	*NA*	As long as the market price of XYZ advances, the stop is not

#	Step	Reported Event	Comments
	conditions and share price of XYZ		triggered.
6	The underlying condition is met and the order becomes effective	*Broker 2 reports an **Order Effective event*** type: MEOE orderKeyDate: 20180417T000000 orderID:O45678 symbol: XYZ priorOrderKeyDate: 20180417T000000 priorOrderID: O34567 eventTimestamp: 20180417T153030.857389 side: S price: quantity: 1000 orderType: MKT timeInForce: GTC	The market price for XYZ declines and hits or goes through the stop price ($35.00), triggering a market order to sell the 1,000 shares of XYZ. If a new Order Key is assigned when the condition becomes effective, the Prior Order Key with *orderID* O34567 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Effective event with the related New Order event. If no new Order Key is assigned, the Prior Order Key fields must be left blank, and the Order Effective event will be linked to the New Order event using the Order Key. The *eventTimestamp* must be populated with the time the stop was triggered and the order becomes effective.
7	Broker 2 routes the order to Exchange	*Broker 2 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153030.957389 manualFlag: false senderIMID: 456:FRMB destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: S price: quantity: 1000 orderType: MKT timeInForce: GTC tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
8	The Exchange accepts the	*EXCH1 reports a Participant **Order Accepted event***	

#	Step	Reported Event	Comments
	order from Broker 1		

2.15.2. Stop on Quote Order

This scenario illustrates the CAT reporting requirements when a customer places an order with an Industry Member and communicates instructions that a market order be triggered by a quotation at the stop price. The customer places a GTC sell order and provides instructions to Industry Member Broker 1 specifying that, should a quotation in XYZ appear at $35.00 (i.e., the stop price), the order should become immediately executable as a market order. Broker 1 holds the order until the condition is triggered (i.e., a quotation at the stop price), at which point Broker 1 routes the order to an exchange for execution.
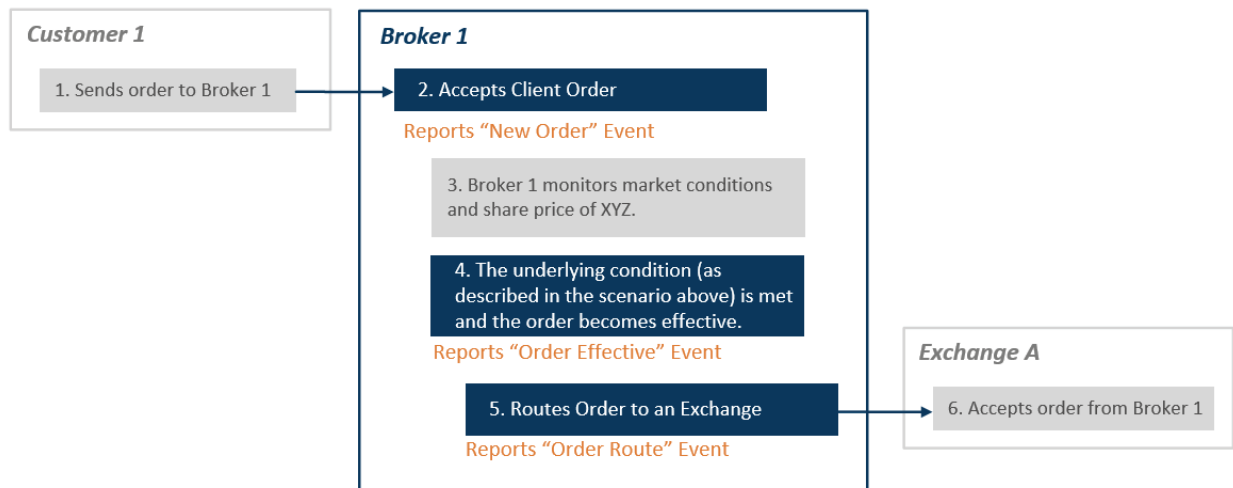
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event with applicable *handlingInstructions*)
- The time at which the stop price is hit, and the underlying condition of the order becomes effective (Order Effective event)
- The route of the customer order to the exchange (Order Route event)

If the order is received/originated or routed as a Stop on Quote order, the o*rderType* field must be populated with a value of 'MKT'. If the order is received/originated or routed as a Stop Limit on Quote order, the *orderType* must be populated with a value of 'LMT', and the *price* field must be populated. Refer to CAT FAQ B57 for additional information.

#	Step	Reported Event	Comments
1	Customer sends an 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: O12321 symbol: XYZ eventTimestamp: 20180417T143030.234456 manualFlag: false deptType: A side: S price: quantity: 1000 orderType: MKT timeInForce: GTC tradingSession: REG handlingInstructions: STOP=35.00|SOQ custDspIntrFlag: false firmDesignatedID: IN004 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Broker 1 is required to report a *handlingInstructions* value of 'STOP' (Stop Price) paired with a value representing the predetermined stop (i.e., $35.00). A *handlingInstructions* value of 'SOQ' (Stop on Quote) must also be populated to indicate that a market order is triggered by a quotation at the stop price. If the order was a Stop Limit on Quote order, a *handlingInstructions* value of 'SLQ' would be populated instead of 'SOQ'.
3	Broker 1 monitors market conditions and quotation activity in XYZ	*NA*	As long as the quotations in XYZ advance, the stop on quote is not triggered.
4	The underlying condition is met and the order becomes effective	*Broker 1 reports an **Order Effective event*** type: MEOE orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ priorOrderKeyDate: priorOrderID: eventTimestamp: 20180417T153030.957389 side: S price: quantity: 1000 orderType: MKT timeInForce: GTC	The quotation prices in XYZ decline and hit or goes through the stop price ($35.00), triggering a market order to sell the 1,000 shares of XYZ. If a new Order Key is assigned when the condition becomes effective, the Prior Order Key with *orderID* O12321 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Effective event with the related New Order event. If no new Order Key is assigned, the Prior Order Key fields must be left blank, and the Order Effective event will be linked to the New Order event using the Order Key. The *eventTimestamp* must be populated with the time the stop was triggered and the order becomes effective.

#	Step	Reported Event	Comments
5	Broker 1 routes the order to Exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ eventTimestamp: 20180417T153030.957389 manualFlag: false senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: S price: quantity: 1000 orderType: MKT timeInForce: GTC tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
6	The Exchange accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	

2.15.3. Trailing Stop Order

This scenario illustrates the CAT reporting requirements when a customer places a trailing stop order with Industry Member Broker 1, who routes the order to Broker 2 for further handling and execution. For the purposes of CAT reporting, a trailing stop order is defined as outlined in FAQ B62.

In this scenario, a customer of Broker 1 places a GTC trailing stop sell order at 90% of the prevailing market price. Broker 1 routes the order to Broker 2. Broker 1 relies on Broker 2 to calculate the initial Trailing Stop price, which it determines upon receipt (i.e., initially, $18.00). Broker 2 continuously re-calculates the trailing stop price as appropriate, and the order is retained by Industry Member Broker 2 until the trailing stop price is triggered.

The price of XYZ advances to a high of $30.00 per share, and the highest calculated trailing stop price is $27.00 (i.e., market price of $30.00 X 90%). The market price for XYZ subsequently declines and hits or go through the highest calculated trailing stop price (i.e. $27.00), which triggers a market order to sell the 1,000 shares of XYZ. Once the limit order is triggered, Broker 2 routes the order to an exchange for execution.
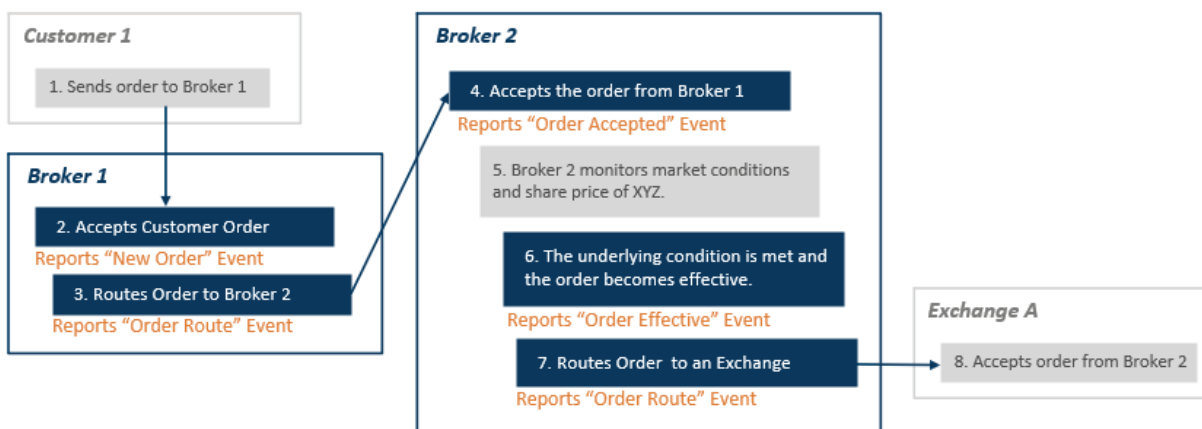
Industry Member Broker 1 is required to report:

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

Industry Member Broker 2 is required to report:

- The receipt of the order from Broker 1 (Order Accepted event with applicable *handlingInstructions)*
- The time at which the stop price is hit, and the underlying condition of the order becomes effective (Order Effective event)
- The route of the customer order to the exchange (Order Route event)

If the order is received/originated or routed as a Trailing Stop order, the o*rderType* field must be populated with a value of 'MKT'. If the order is received/originated or routed as a Trailing Stop Limit order, the *orderType* must be populated with a value of 'LMT', and the *price* field must be populated. While the scenario presented below is a Market Order, in Trailing Stop Limit orders the Limit price denoted in the *price* field and *triggerPrice* field may differ. Refer to CAT FAQ B57 for additional information.

#	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	Broker 1 is required to populate a *handlingInstructions* value of 'TS' (Trailing Stop) to indicate that this is a trailing stop order. Broker 1 relies on Broker 2 to

| #	Step	Reported Event	Comments
		eventTimestamp: 20180417T143030.234456 manualFlag: false deptType: A side: S price: quantity: 1000 orderType: MKT timeInForce: GTC tradingSession: REG handlingInstructions: TS custDspIntrFlag: false firmDesignatedID: IN004 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	calculate the initial Trailing Stop price. Broker 1 relays that the calculation be determined at 90% of the prevailing market price. While this captured in Broker 1's books and records, it is not required to be reported to CAT.
3	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ eventTimestamp: 20180417T143030.957389 manualFlag: false senderIMID: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: AO122 session: side: S price: quantity: 1000 orderType: MKT timeInForce: GTC tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: TS	
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: 20180417T143030.957389 manualFlag: false receiverIMID: 456:FRMB	Upon receipt, Broker 2 determines the initial Trailing Stop calculation of 90% of the prevailing market price to be $18.00. While this captured in Broker 2's books and records, it is not required to be reported to CAT.

#	Step	Reported Event	Comments
		senderIMID: 123:FRMA senderType: F routedOrderID: AO122 affiliateFlag: false deptType: A side: S price: quantity: 1000 orderType: MKT timeInForce: GTC tradingSession: REG isoInd: NA custDspIntrFlag: false handlingInstructions: TS	
5	Broker 2 monitors market conditions and share price of XYZ	*NA*	As the market price of XYZ advances, Broker 2 will continue to re-calculate the trailing stop price at 90% of market value. CAT does not require an Order Modified event to be reported each time Broker 2's system re-calculates the trailing stop price. However, Broker 2's system will need to retain the highest calculated trailing stop price.
6	The underlying condition is met and the order becomes effective	*Broker 2 reports an* **Order Effective event** type: MEOE orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ priorOrderKeyDate: priorOrderID: eventTimestamp: 20180417T153030.957389 side: S price: quantity: 1000 orderType: MKT timeInForce: GTC triggerPrice: 27.00	The market price for XYZ declines and hits or goes through the highest calculated trailing stop price ($27.00), triggering a market order to sell the 1,000 shares of XYZ. Since the trigger price was not explicitly captured in the *handlingInstructions* field in the Order Accepted event, then the *triggerPrice* field must be populated on the Order Effective event. If a new Order Key is assigned when the condition becomes effective, the Prior Order Key with *orderID* O12321 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Effective event with the related New Order event. If no new Order Key is assigned, the Prior Order Key fields must be left blank, and the Order Effective event will be linked to the New Order event using the Order Key.

#	Step	Reported Event	Comments
			The *eventTimestamp* must be populated with the time the stop was triggered and the order becomes effective.
7	Broker 1 routes the order to the Exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ eventTimestamp: 20180417T153030.957389 manualFlag: false senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: S price: quantity: 1000 orderType: MKT timeInForce: GTC tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: RAR	
8	The Exchange accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	

2.15.4. Stop Stock Order

In this scenario, an institutional customer places an order with Industry Member Broker 1, and the parties agree that the entire order will be executed at stop stock price or better. Broker 1 later executes the trade in an off-exchange transaction, filling the customer order from existing inventory held in a proprietary account at the stop stock price.
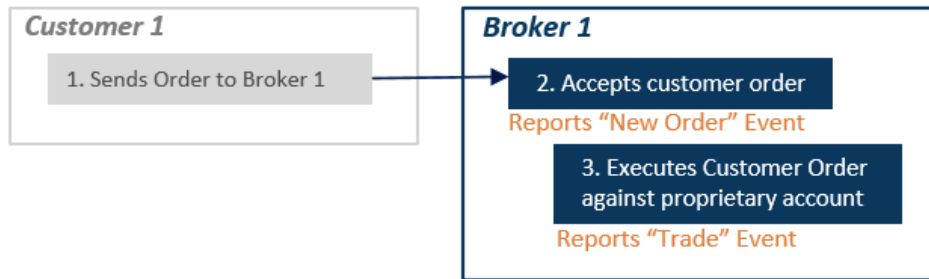
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event with applicable *handlingInstructions*)

- The execution of the customer order against its proprietary account (Trade 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: 8.64 quantity: 1000 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: SW=8.64 custDspIntrFlag: false firmDesignatedID: IN004 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Broker 1 is required to report a *handlingInstructions* value of 'SW' (Stop Stock Transaction) indicating that the order resulted from an agreement that it be executed at stop stock price or better. The SW *handlingInstructions* must be paired with a value representing the agreed upon price ($8.64).
3	Broker 1 executes the order against its own proprietary account	*Broker 1 reports a* **Trade event** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180417T153030.123456	The *buyDetails* reflect the details of customer order O12321. The *sellDetails* capture the FDID of the firm proprietary account from which the customer order was filled.

#	Step	Reported Event	Comments
		manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 8.64 capacity: P tapeTradeID: TRF123 marketCenterID: D sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: O12321 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	

2.15.5. Stop Price is Based on Underlying Condition

This scenario illustrates the CAT reporting requirements when a customer places a conditional order that has multiple underlying conditions.

In this example, the customer places a conditional stop order to sell 100 shares of security XYZ (Order A) with Industry Member Broker 1. The customer provides instructions specifying that the stop price for Order A be determined upon the execution of a separate order in security ABC (Order B).

This scenario addresses the CAT Reporting requirements for Order A. Unlike other stop scenarios (Such as Scenario 2.15.1) where the stop price was known at the time of order receipt, the stop price for Order A is unknown because it is based on an underlying condition (e.g., the execution of Order B). Upon receipt of Order A, Broker 1 reports a New Order event with *handlingInstructions* of 'CND' (Conditional Order) and 'STOPF' (Stop Formula). The 'STOPF' *handlingInstructions* value denotes that the stop price of the order is not known at the time of order receipt, as it is based on a formula. Broker 1 is holding the order at the time all underlying conditions of the order are met (execution of Order B and the stop being triggered), at which point Broker 1 routes the order to an exchange for execution.
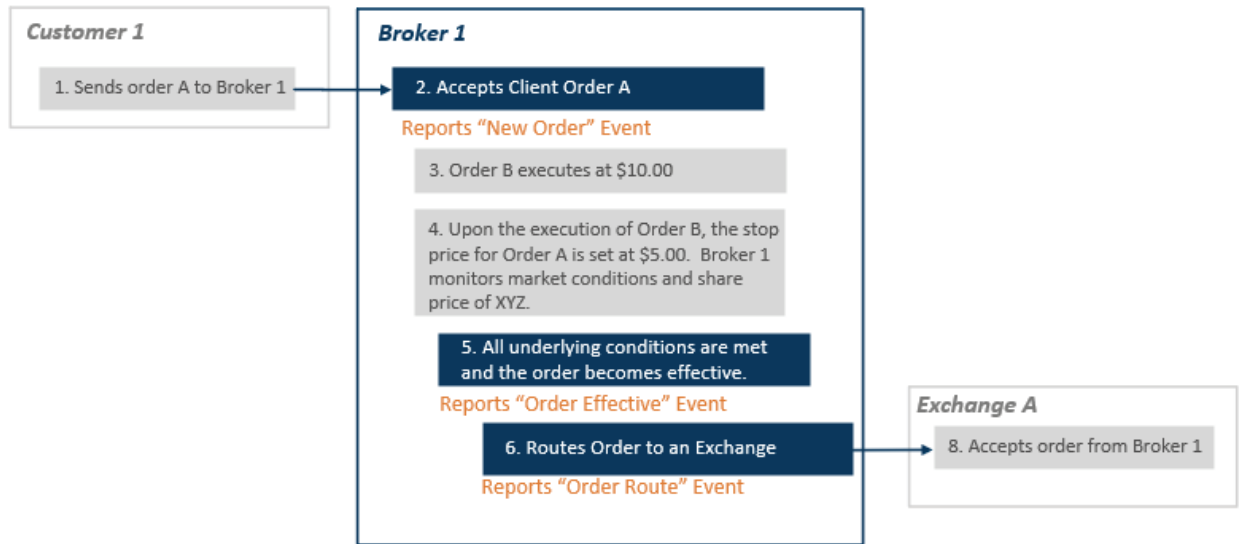
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event with applicable *handlingInstructions*)
- All conditions are met, and the order becomes effective (Order Effective event)
- The route of the customer order to the exchange (Order Route event)

If the order is received/originated or routed as a Stop order, the o*rderType* field must be populated with a value of 'MKT'. If the order is received/originated or routed as a Stop Limit order, the *orderType* must be populated with a value of 'LMT', and the *price* field must be populated. Refer to CAT FAQs B57 for additional information.

Since Broker 1 is holding the order at the time that all underlying conditions are met such that the order becomes and remains effective, Broker 1 will be required to report an Order Effective event to CAT. Refer to CAT FAQ B67 for additional information.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1 (Order A).	*NA*	The customer provides instructions that Order A is conditional upon the execution of Order B, at which point Order A's stop price is set at $5.00 below the execution price of Order B.
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	Broker 1 is required to report a *handlingInstructions* values of 'CND' (Conditional Order) and 'STOPF' (Stop Formula). The 'CND' instruction denotes that Order A is conditional on another order (Order B). The 'STOPF' instruction indicates that this order is a stop order, but that the

#	Step	Reported Event	Comments
		deptType: A side: S price: quantity: 100 orderType: MKT timeInForce: GTC tradingSession: REG handlingInstructions: CND|STOPF custDspIntrFlag: false firmDesignatedID: IN004 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	stop price is unknown at the time of order receipt.
3	Order B executes at $10.00.	*NA*	Broker 1 would be obligated to report all relevant CAT reportable events for Order B. This scenario addresses the CAT Reporting requirements for Order A.
4	Upon the execution of Order B, the stop price for Order A is set at $5.00. Broker 1 monitors market conditions and share price of XYZ	*NA*	As long as the market price of XYZ advances, the stop is not triggered. Broker 1 is not required to report to CAT when the stop price for Order A is determined, as the stop has not been triggered.
5	All underlying conditions are met and the order becomes effective	*Broker 1 reports an **Order Effective event*** type: MEOE orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ priorOrderKeyDate: priorOrderID: eventTimestamp: 20180417T153030.857389 side: S price: quantity: 100 orderType: MKT timeInForce: GTC triggerPrice: 5.00	Broker 1 is required to report an Order Effective event when *all* underlying conditions are met such that the order becomes and remains effective. The market price for XYZ declines and hits or goes through the stop price ($5.00), triggering a market order to sell 100 shares of XYZ. If a new Order Key is assigned when the condition becomes effective, the Prior Order Key with *orderID* O12321 must be populated in the *priorOrderID* field. The Prior Order Key links the Order Effective event with the related New Order event. If no new Order Key is assigned, the Prior Order Key fields must be left blank, and the Order

#	Step	Reported Event	Comments
			Effective event will be linked to the New Order event using the Order Key.
			The *eventTimestamp* must be populated with the time that all underlying conditions were met (e.g., the execution of Order B and the stop being triggered) and the order becomes effective.
			Since the trigger price was not explicitly captured in the *handlingInstructions* field in the New Order event, then the *triggerPrice* field must be populated on the Order Effective event.
6	Broker 1 routes the order to Exchange	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O12321 symbol: XYZ eventTimestamp: 20180417T153030.957389 manualFlag: false senderIMID: 456:FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: S price: quantity: 100 orderType: MKT timeInForce: GTC tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
7	The Exchange accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	

2.15.6. Order Contingent on Spread Condition

This scenario illustrates the CAT reporting requirements when a customer places an order with a spread condition such that order becomes activated or inactivated multiple times throughout the day.

In this example, the customer places an order to sell 500 shares of security XYZ with Industry Member Broker 1. The customer provides instructions specifying that the order be acted upon only when the market price of security XYZ is within a $10.00 spread from the market price of security ABC. When these spread conditions are met (e.g., the market price of security XYZ is within a $10.00 spread from the market price of security ABC), Broker 1 routes the order to Industry Member Broker 2. When these spread conditions are no longer active (e.g., the market price of security XYZ exceeds a $10.00 spread from the market price of security ABC), Broker 1 cancels route to Broker 2. Later that day, the market price of security XYZ returns to being within a $10.00 spread from the market price of security ABC, at which point Broker 1 routes the order to Industry Member Broker 3 where the order is executed.
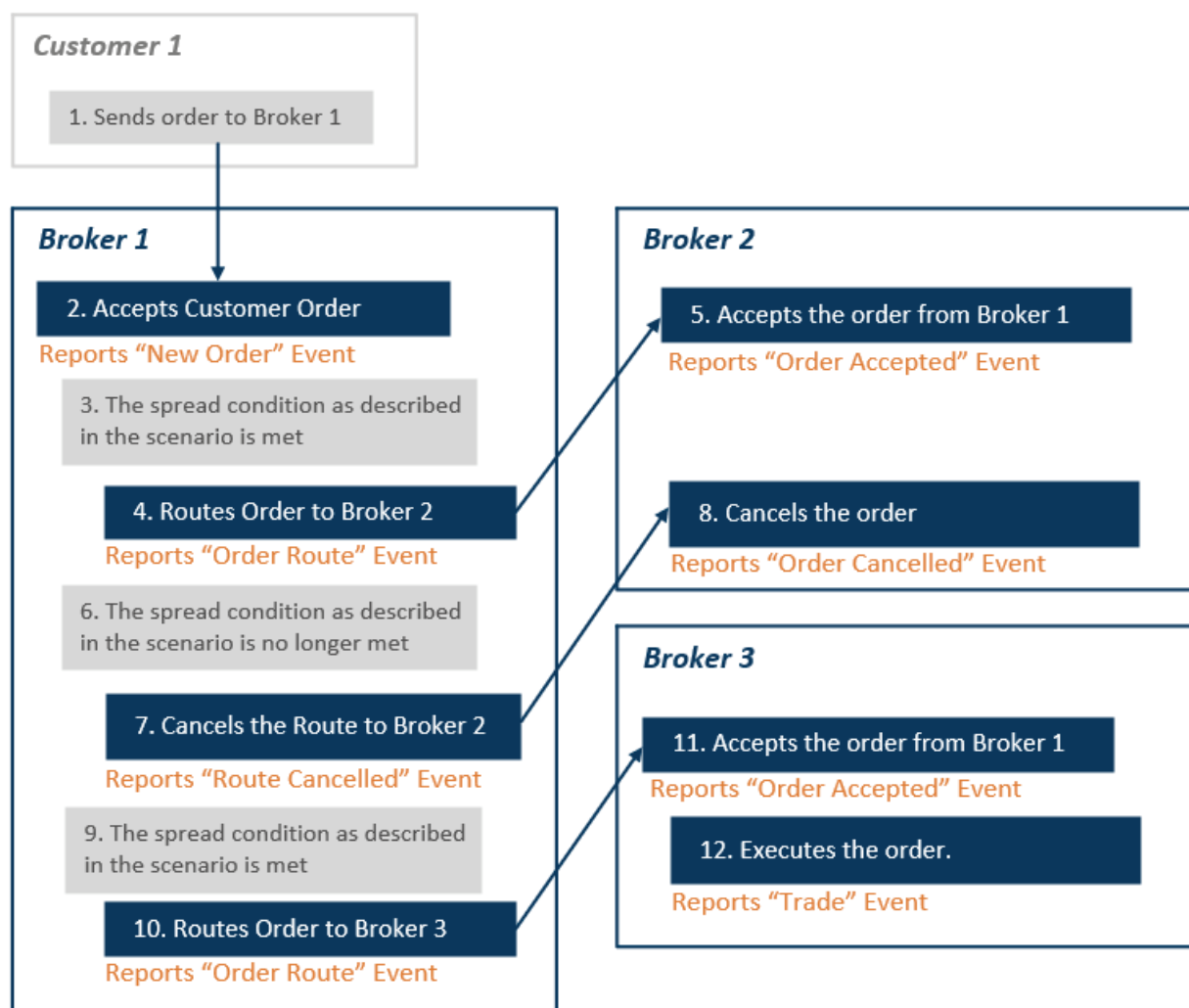
Industry Member Broker 1 is required to report:

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

- The initial route of the customer order to Broker 2 when the spread conditions are initially met (Order Route event)
- The cancellation of the route to Broker 2 (Route Cancelled event)
- The route of the customer order to Broker 3 when the spread conditions are subsequently met (Order Route event)

Industry Member Broker 2 is required to report:

- The initial receipt of the order from Broker 1 (Order Accepted event)
- The cancellation of the order received from Broker 1 (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. Therefore, Broker 1 is 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 they received from Broker 1 to CAT.

#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	The customer provides instructions specifying that the order be acted upon only when the market price of security XYZ is within a $10.00 spread from the market price of security ABC.
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T143035.123456 manualFlag: false deptType: A side: S price: quantity: 500 orderType: MKT timeInForce: GTC tradingSession: REG handlingInstructions: CSC	Broker 1 is required to report a *handlingInstructions* value of 'CSC' (Contingent on Spread Condition) denoting the spread condition, which may cause the order to become active or inactive multiple times throughout the day.

#	Step	Reported Event	Comments
		custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	The spread condition is met (e.g., the market price of security XYZ is within a $10.00 spread from the market price of security ABC).	*NA*	Broker 1 is **not** required to report an Order Effective event to CAT. The Order Effective event must **not** be used in instances when an order has conditions that can be become activated and inactivated multiple times throughout the day, such as the spread condition in this scenario. Refer to CAT FAQ B66 for additional information.
4	Broker 1 routes the order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.123456 manualFlag: false senderIMID: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: XYZO555 session: side: S price: quantity: 500 orderType: MKT timeInForce: GTC tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
5	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ	

#	Step	Reported Event	Comments
		eventTimestamp: 20180417T153035.123456 manualFlag: false receiverIMID: 456:FRMB senderIMID: 123:FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: false deptType: A side: S price: quantity: 500 orderType: MKT timeInForce: GTC tradingSession: REG isoInd: NA custDspIntrFlag: false handlingInstructions:	
6	The spread condition is no longer met (e.g., the market price of security XYZ is **not** within a $10.00 spread from the market price of security ABC).	*NA*	
7	Broker 1 cancels the route to Broker 2	*Broker 2 reports a* **Route Cancelled event** type: MECR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.223456 manualFlag: false cancelQty: 500 senderIMID: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: XYZO555 session:	The *eventTimestamp* is the time that the route cancellation was confirmed.
8	Broker 2 receives the cancellation request from Broker 1 and cancels the order.	*Broker 2 reports an* **Order Cancelled event** type: MEOC orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ	In this example, the *eventTimestamp* reflects the time that the cancellation was confirmed, which is the same time as the receipt of the request from Broker 2. In this example, the receipt time of the customer request is captured in

#	Step	Reported Event	Comments
		eventTimestamp: 20180417T153535.983751 manualFlag: false cancelQty: 500 leavesQty: 0 initiator: C requestTimestamp: 20180417T153535.983751	the *requestTimestamp* field on the Order Modified event. Broker 2 may alternatively capture the request time using a separate Order Cancel Request event.
9	The spread condition is met (e.g., the market price of security XYZ is within a $10.00 spread from the market price of security ABC).		Broker 1 is *not* required to report an Order Effective event to CAT. The Order Effective event must *not* be used in instances when an order has conditions that can become activated and inactivated multiple times throughout the day, such as the spread condition in this scenario. Refer to CAT FAQ B66 for additional information.
10	Broker 1 routes the order to Broker 3	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T154220.145092 manualFlag: false senderIMID: 123:FRMA destination: 987:FRMC destinationType: F routedOrderID: XYZO560 session: side: S price: quantity: 500 orderType: MKT timeInForce: GTC tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
11	Broker 3 accepts the order from Broker 1	*Broker 3 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O6789	

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180417T154220.145092 manualFlag: false receiverIMID: 987:FRMC senderIMID: 123:FRMA senderType: F routedOrderID: XYZO560 affiliateFlag: false deptType: A side: S price: quantity: 500 orderType: MKT timeInForce: GTC tradingSession: REG isoInd: NA handlingInstructions: custDspIntrFlag: false	
12	Broker 3 executes the order	*Broker 3 reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ124 symbol: XYZ eventTimestamp: 20180417T154620.234456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 500 price: 20.00 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: O6789 side: SL sellDetails: side: B firmDesignatedID: PROP123 accountHolderType: P	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.

2.16. RFQ and Solicitation Response Scenarios

This section illustrates the CAT reporting requirements for responses to RFQs (Request for Quote) and other forms of solicitation. Refer to Section 3.7 for Options RFQ and Solicitation Response scenarios.

2.16.1. Response to RFQ is Sent Electronically and is Executed by the Solicitor

This scenario illustrates the CAT reporting requirements when an Industry Member issues an RFQ through an RFQ platform. In this scenario, multiple Industry Members respond to the RFQ by sending FIX messages directly to the requesting Industry Member that are immediately actionable. Upon selection of a response (either by the trader or automatically by the IM's trading system), the Solicitor executes the order for the selected response against the customer order without any further action required by the winning bidder.
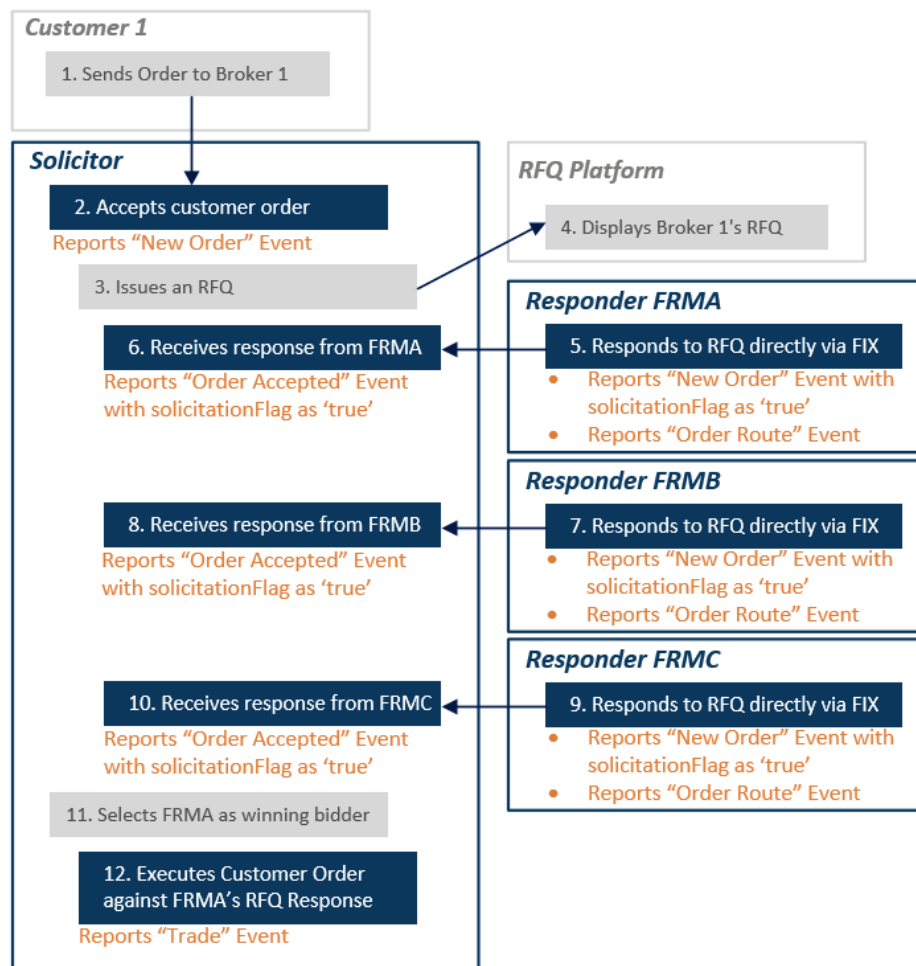
Each Responder is required to report the following:

- The origination of the RFQ Response (New Order event with the *solicitationFlag* set to 'true' and the *RFQID* populated)

- The route of the RFQ Response to The Solicitor (Order Route event)

The Solicitor is required to report the following:

- The receipt of a customer order (New Order event)
- The receipt of each RFQ response (Order Accepted event with *solicitationFlag* set to 'true')
- The execution of the customer order against the selected response (Trade event)

While Industry Members are not required to report RFQs or other forms of solicitation to CAT, Industry Members are required to report responses to RFQs and other forms of solicitation as described in CAT FAQ B45. Responses communicated in standard electronic format (e.g. FIX) that are immediately actionable are reportable by both the Industry Member issuing the RFQ or solicitation ("the Solicitor") and the Industry Member responding to the RFQ or solicitation ("the Responder"), including responses that were not ultimately selected.

#	Step	Reported Event	Comments
1	The Solicitor FRMS receives a customer order	*Solicitor FRMS reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: C56743 symbol: XYZ eventTimestamp: 20180417T153033.234456 manualFlag: false deptType: T solicitationFlag: false RFQID: side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	The Solicitor issues an RFQ through an	*N/A*	Industry Members are not required to report RFQs or other forms of

#	Step	Reported Event	Comments
	RFQ platform		solicitation to CAT.
3	Responder FRMA originates and routes an RFQ Response to the Solicitor	*Responder FRMA reports a **New Order event** and an **Order Route event*** ***New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: RFQR1234 symbol: XYZ eventTimestamp: 20180417T153030.234456 manualFlag: false deptType: A solicitationFlag: true RFQID: RFQ65432 side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: FRMA1235 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N ***Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: RFQR1234 symbol: XYZ eventTimestamp: 20180417T153030.234456 manualFlag: false senderIMID: FRMA destination: FRMS destinationType: F routedOrderID: AO222 side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false	In its New Order event, FRMA must populate the *solicitationFlag* as 'true'. In this example, the RFQID is available and must be populated by FRMA.

#	Step	Reported Event	Comments
		isoInd: NA	
4	The Solicitor receives the RFQ Response from FRMA	*Solicitor FRMS reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O1234 symbol: XYZ eventTimestamp: 20180417T153030.234456 manualFlag: false receiverIMID: FRMS senderIMID: FRMA senderType: F routedOrderID: AO222 affiliateFlag: false deptType: T side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false solicitationFlag: true	In its Order Accepted event, FRMS must populate the *solicitationFlag* as 'true'.
5	Responder FRMB originates and routes an RFQ Response to the Solicitor	*Responder FRMB reports a **New Order event** and an **Order Route event*** **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: RFQR2345 symbol: XYZ eventTimestamp: 20180417T153033.234456 manualFlag: false deptType: A solicitationFlag: true RFQID: RFQ65432 side: SL price: 10.01 quantity: 1000 orderType: LMT	In its New Order event, FRMB must populate the *solicitationFlag* as 'true'. In this example, the RFQID is available and must be populated by FRMB.

#	Step	Reported Event	Comments
		timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: FRMB9876 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N ***Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: RFQR2345 symbol: XYZ eventTimestamp: 20180417T153033.234456 manualFlag: false senderIMID: FRMB destination: FRMS destinationType: F routedOrderID: AO224 side: SL price: 10.01 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
6	The Solicitor receives the RFQ Response from FRMB	*Solicitor FRMS reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O3456 symbol: XYZ eventTimestamp: 20180417T153033.234456 manualFlag: false receiverIMID: FRMS senderIMID: FRMB senderType: F routedOrderID: AO224 affiliateFlag: false deptType: T side: SL price: 10.01	In its Order Accepted event, FRMS must populate the *solicitationFlag* as 'true'.

#	Step	Reported Event	Comments
		quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false solicitationFlag: true	
7	Responder FRMC originates and routes an RFQ Response to the Solicitor	*Responder FRMC reports a **New Order event** and an **Order Route event*** ***New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: RFQR4567 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A solicitationFlag: true RFQID: RFQ65432 side: SL price: 10.02 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: FRMC6758 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N ***Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: RFQR4567 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false senderIMID: FRMC destination: FRMS destinationType: F	In its New Order event, FRMC must populate the *solicitationFlag* as 'true'. In this example, the RFQID is available and must be populated by FRMA.

#	Step	Reported Event	Comments
		routedOrderID: AO226 side: SL price: 10.02 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
8	The Solicitor receives the RFQ Response from FRMC	*Solicitor FRMS reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O6789 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false receiverIMID: FRMS senderIMID: FRMC senderType: F routedOrderID: AO226 affiliateFlag: false deptType: T side: SL price: 10.02 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false solicitationFlag: true	In its Order Accepted event, FRMS must populate the *solicitationFlag* as 'true'.
9	The Solicitor executes the order from FRMA against the original customer order	*The Solicitor reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ124 symbol: XYZ eventTimestamp: 20180417T153036.234456 manualFlag: false cancelFlag: false cancelTimestamp:	

#	Step	Reported Event	Comments
		quantity: 1000 price: 10.00 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: C56743 side: B sellDetails: orderKeyDate: 20180417T000000 orderID: O1234 side: SL	

2.16.2. Response to RFQ is Sent Through an RFQ Platform, and the Solicitor Routes the Customer Order to the Winning Bidder

This scenario illustrates the CAT reporting requirements when an Industry Member issues an RFQ and receives multiple responses through an RFQ platform that is not part of the Industry Member's OMS/EMS are not immediately actionable. Upon selection of a response, the Industry Member routes the customer order to the winner.
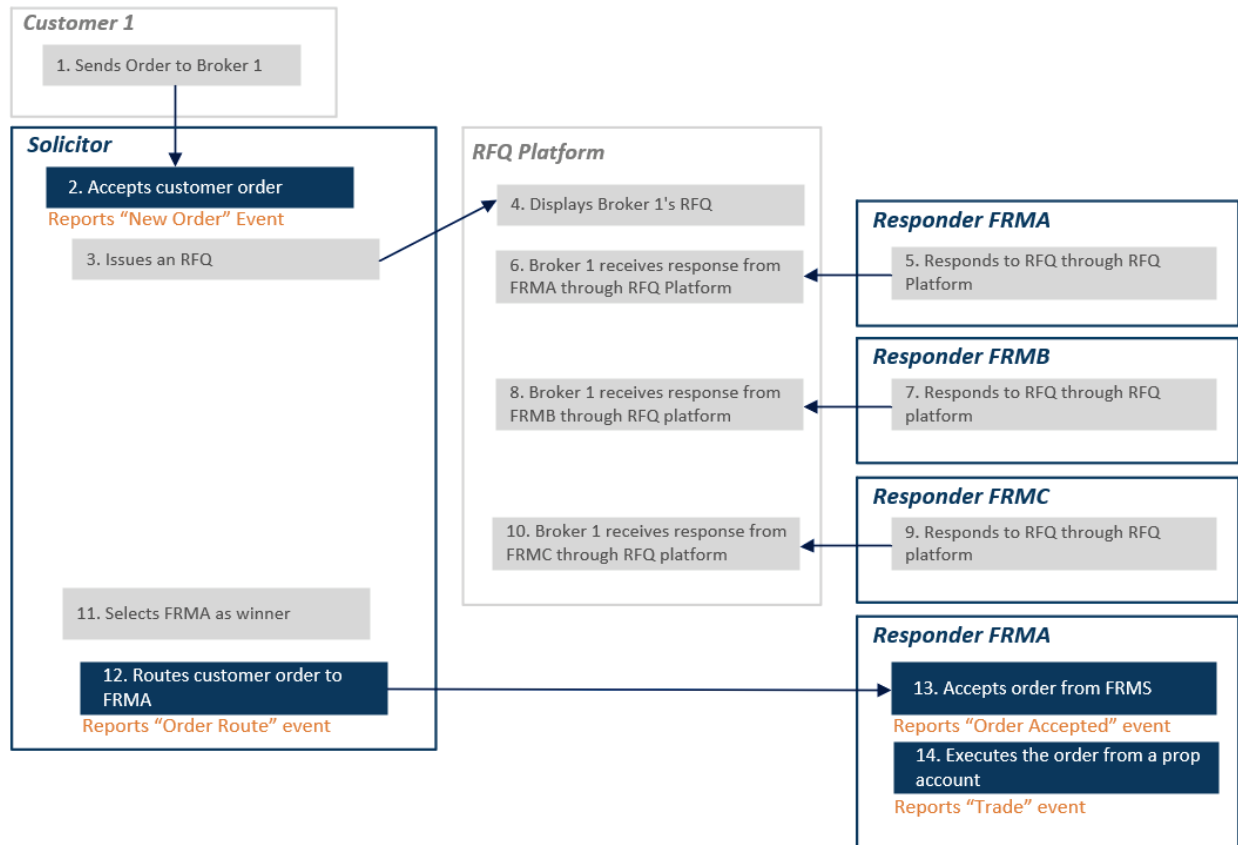
The Solicitor is required to report the following:

- The receipt of a customer order (New Order event)
- The route of the customer order to the winning Responder (Order Route events

The selected Responder is required to report the following:

- The receipt of the order from the Solicitor (Order Accepted event)
- Execution of the customer order from a prop account (Trade event)

Responses to RFQs issued on an RFQ platform are reportable to CAT if the response is communicated to the Industry Member in standard electronic format (e.g. FIX), and the response is immediately actionable. However, responses to RFQs or other forms of solicitation that are communicated in standard electronic format or are not immediately actionable are not required to be reported to CAT in Phase 2d. However, this activity is expected to be required beginning in July 2023.

In this scenario, further action is required upon selection of a winning response before the order can be executed. Therefore, the RFQ responses are not reportable to CAT in Phase 2d.

All orders received or originated as the result of such RFQ or solicitation process must be reported and must be identified as being part of an RFQ or solicitation process subject to the phasing requirements as set forth in the CAT Reporting Technical Specifications for Industry Members. The *solicitationFlag* is not required to be populated as 'true' on events originated after selection of the winning bid. Refer to CAT FAQ B45 for additional information.

#	Step	Reported Event	Comments
1	The Solicitor FRMS receives a customer order	*Solicitor FRMS reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: C56743 symbol: XYZ eventTimestamp: 20180417T153033.234456 manualFlag: false deptType: T side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	The Solicitor issues an RFQ	*N/A*	Industry Members are not required to report RFQs or other forms of solicitation to CAT.
3	Responders FRMA, FRMB and FRMC respond to an RFQ	*N/A*	Responses to RFQs or other forms of solicitation that are not immediately actionable are not required to be reported to CAT in Phase 2d
4	The Solicitor receives the RFQ Responses from FRMA, FRMB and FRMC	*N/A*	Responses to RFQs or other forms of solicitation that are not immediately actionable are not required to be reported to CAT in Phase 2d
5	The Solicitor routes the customer order to the winning Responder, FRMA	*Solicitor FRMS reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: C56743	

#	Step	Reported Event	Comments
		symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false senderIMID: FRMS destination: FRMA destinationType: F routedOrderID: AO227 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
6	FRMA accepts the order from the Solicitor	*Responder FRMA reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: C4765 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false receiverIMID: FRMA senderIMID: FRMS senderType: F routedOrderID: AO2267 affiliateFlag: false deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false solicitationFlag: false	The *solicitationFlag* is not required to be populated as 'true' on events originated after selection of the winning bid.
7	FRMA executes the order from a prop account	*The Solicitor reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000	

#	Step	Reported Event	Comments
		tradeID: TXYZ124	
		symbol: XYZ	
		eventTimestamp:	
		20180417T153036.634456	
		manualFlag: false	
		cancelFlag: false	
		cancelTimestamp:	
		quantity: 1000	
		price: 10.00	
		capacity: P	
		tapeTradeID: TRF123	
		marketCenterID: DN	
		sideDetailsInd: NA	
		buyDetails:	
		orderKeyDate:	
		20180417T000000	
		orderID: C4765	
		side: B	
		sellDetails:	
		side: SL	
		firmDesignatedID: PROP1234	
		accountHolderType: P	

2.16.3. Response to RFQ is Sent Electronically and Further Action is Required

This scenario illustrates the CAT reporting requirements when an Industry Member issues an RFQ through an RFQ platform. In response to the RFQ, multiple Industry Members respond by sending FIX messages directly to the requesting Industry Member's OMS that are not immediately actionable. Although the RFQ responses were sent via standard electronic format directly to the Industry Member's OMS/EMS, the Industry Members sending the responses are required to take additional action by sending a separate order to the requestor before any execution can occur, and would therefore not be considered immediately actionable.
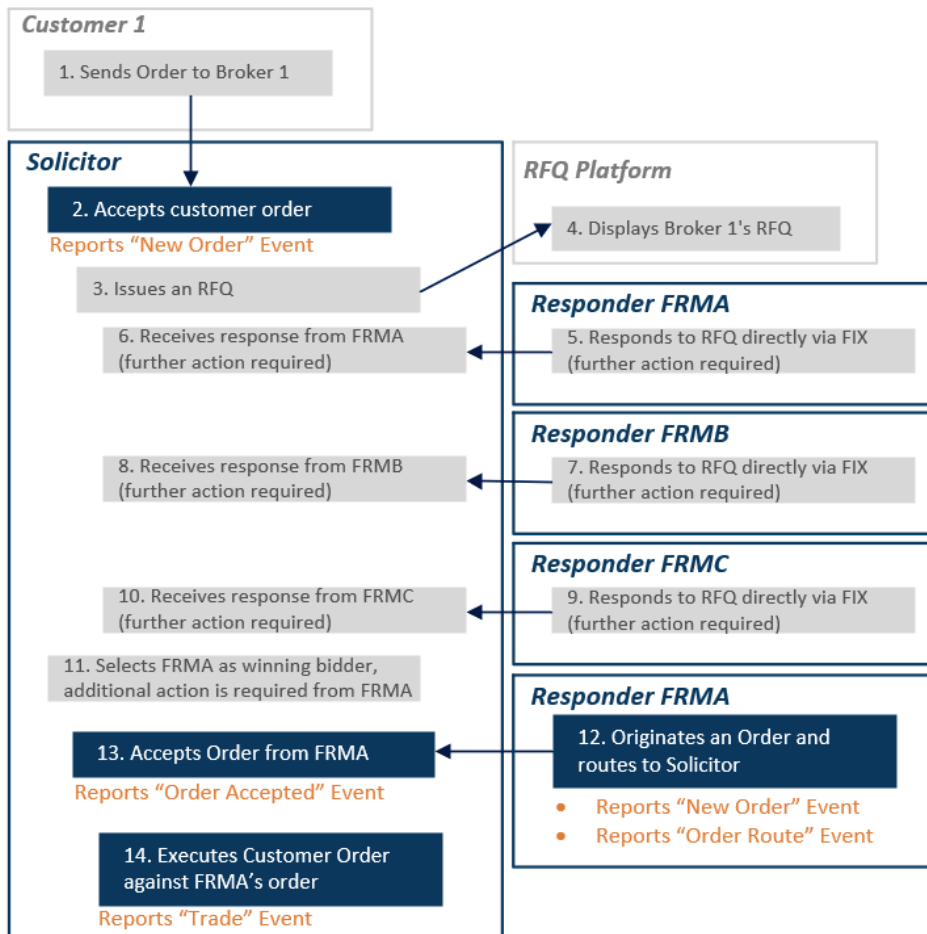
The selected Responder is required to report the following:

- The origination of a New Order for the selected response (New Order event)
- The route of the order to the Solicitor (Order Route event)

The Solicitor is required to report the following:

- The receipt of a customer order (New Order event)
- The receipt of the order from the winning Responder (Order Accepted event)
- The execution of the customer order against the selected response (Trade event)

Although the RFQ responses were sent via standard electronic format directly to the Industry Member's OMS/EMS, the responses are not reportable in Phase 2d because the Industry Members sending the responses would be required to take additional action.

All orders received or originated as the result of such RFQ or solicitation process must be reported and must be identified as being part of an RFQ or solicitation process subject to the phasing requirements as set forth in the CAT Reporting Technical Specifications for Industry Members. The *solicitationFlag* is not

required to be populated as 'true' on events originated after selection of the winning bid. Refer to CAT FAQ B45 for additional information.

#	Step	Reported Event	Comments
1	The Solicitor FRMS receives a customer order	*Solicitor FRMS reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: C56743 symbol: XYZ eventTimestamp: 20180417T153033.234456 manualFlag: false deptType: T solicitationFlag: false RFQID: side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	The Solicitor issues an RFQ	*N/A*	Industry Members are not required to report RFQs or other forms of solicitation to CAT.
3	Responders FRMA, FRMB and FRMC respond to an RFQ and further action is required.	*N/A*	Although the RFQ responses were sent via standard electronic format directly to the Industry Member's OMS/EMS, the responses are not reportable in Phase 2d because the Industry Members sending the responses would be required to take additional action.
4	The Solicitor receives the RFQ Responses from FRMA, FRMB and FRMC and selects the response from FRMA	*N/A*	Although the RFQ responses were sent via standard electronic format directly to the Industry Member's OMS/EMS, the responses are not reportable in Phase 2d because the Industry Members sending the responses would be required to take additional action.
5	Upon selection, FRMA originates an order	*Responder FRMA reports a **New Order event***	The *solicitationFlag* is not required to be populated as 'true' on events originated after selection of the winning bid.

#	Step	Reported Event	Comments
		type: MENO orderKeyDate: 20180417T000000 orderID: RFQ3545 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: A solicitationFlag: false RFQID: side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: FRMA1234 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
6	FRMA routes the order to the Solicitor	*Responder FRMA reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: RFQ3545 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false senderIMID: FRMA destination: FRMS destinationType: F routedOrderID: AO226 side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
7	The Solicitor accepts the order from FRMA	*Solicitor FRMS reports an **Order Accepted event***	The *solicitationFlag* is not required to be populated as 'true' on events originated

#	Step	Reported Event	Comments
			after selection of the winning bid.
		type: MEOA orderKeyDate: 20180417T000000 orderID: O8654 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false receiverIMID: FRMS senderIMID: FRMA senderType: F routedOrderID: AO226 affiliateFlag: false deptType: T side: SL price: 10.02 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false solicitationFlag: false	
8	The Solicitor executes the order from FRMA against the original customer order	*The Solicitor reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ124 symbol: XYZ eventTimestamp: 20180417T153036.234456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 10.00 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: C56743 side: B sellDetails: orderKeyDate:	

#	Step	Reported Event	Comments
		20180417T000000 orderID: O8654 side: SL	

2.16.4. Non-CAT Reporting Firm Issues an RFQ and Sends an Order to the Winning Bidder Who is a CAT Reporting Industry Member

This scenario illustrates the CAT reporting requirements when a non-CAT Reporting Asset Manager issues and receives several quotes in response through an RFQ platform that are not immediately actionable. Upon selection of a response from a CAT Reporting Industry Member, the Asset Manager is required to take further action in order to route an order to the winning bidder.
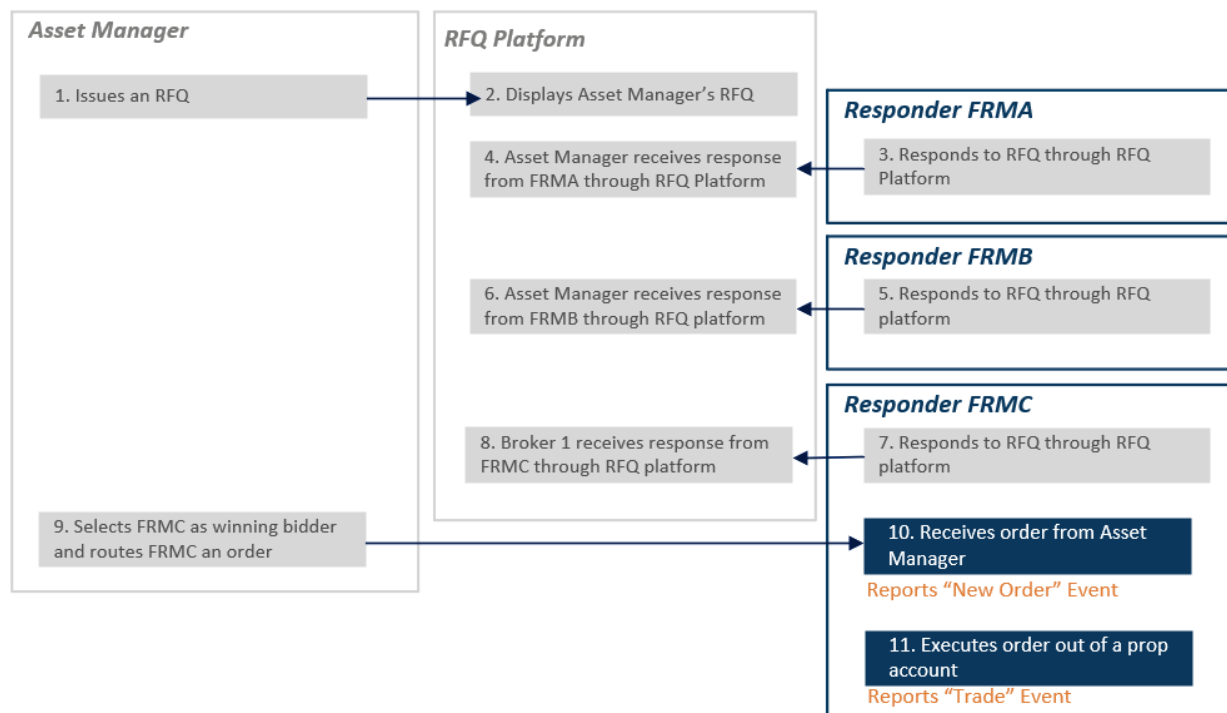
The selected Responder is required to report the following:

- The receipt of a New Order from the Soliciting Asset manager (New Order event)
- The execution of the order (Trade event)

Responses to RFQs issued on an RFQ platform are reportable to CAT if the response is communicated to the Industry Member in standard electronic format (e.g. FIX) and if the response is immediately actionable. However, responses to RFQs or other forms of solicitation that are not immediately actionable

are not considered electronic for CAT Reporting purposes and are not required to be reported to CAT in Phase 2d. However, this activity is expected to become reportable in July 2023.

In this scenario, further action is required by the Solicitor to send an order to the Responder. Therefore, the RFQ responses are not reportable to CAT in Phase 2d.

All orders received or originated as the result of such RFQ or solicitation process must be reported and must be identified as being part of an RFQ or solicitation process subject to the phasing requirements as set forth in the CAT Reporting Technical Specifications for Industry Members. The *solicitationFlag* is not required to be populated as 'true' on events originated after selection of the winning bid. Refer to CAT FAQ B45 for additional information.

#	Step	Reported Event	Comments
1	The Soliciting Asset Manager issues an RFQ	*N/A*	While the Soliciting Asset Manager is not a CAT Reporter, Industry Members are not required to report RFQs or other forms of solicitation to CAT.
2	Responders FRMA, FRMB and FRMC respond to the RFQ	*N/A*	Responses to RFQs or other forms of solicitation that are not immediately actionable are not required to be reported to CAT in Phase 2d.
3	The Soliciting Asset Manager receives the RFQ Responses from FRMA, FRMB and FRMC. The Soliciting Asset Manager selects the response from FRMC and sends FRMC an order	*N/A*	The Soliciting Asset Manager is not a CAT Reporter and is not required to report the origination of the order sent to Responder FRMC.
4	FRMC receives the order from the Soliciting Asset Manager	*Responder FRMC reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: RFQ3545 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false deptType: T solicitationFlag: false RFQID: side: SL price: 10.02 quantity: 1000 orderType: LMT	The *solicitationFlag* is not required to be populated as 'true' on events originated after selection of the winning bid.

#	Step	Reported Event	Comments
		timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: FRMA1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
5	FRMC executes the order	*Responder FRMC reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ124 symbol: XYZ eventTimestamp: 20180417T153036.234456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 1000 price: 10.02 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: side: B firmDesignatedID: PROP123 accountHolderType: P sellDetails: orderKeyDate: 20180417T000000 orderID: RFQ3545 side: SL	

2.17. Additional Reporting Scenarios

2.17.1. 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.
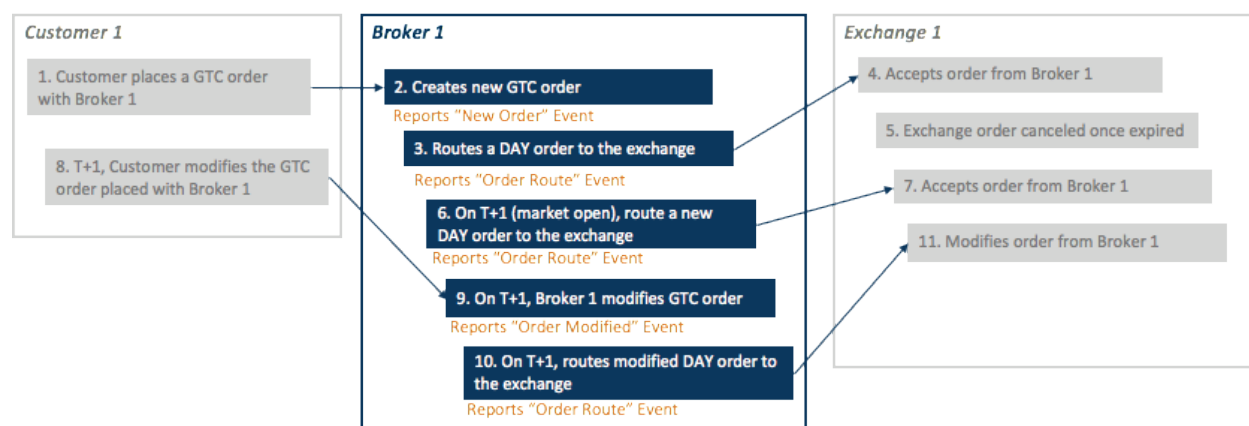
Industry Member Broker 1 is required to report:

- 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 receipt of the customer request on T+1 (*requestTimestamp* on Order Modified event)
- The confirmation of the modification on T+1 (during market hours) (*eventTimestamp* on Order Modified event)
- The route of the modification to the exchange on T+1 (Order Route event)

In this scenario, Broker 1 is not required to report a Route Cancelled event for the route that was sent to the Exchange on T, as the route was a "DAY" order that expired at the end of the day.

Industry Members are required to capture the *eventTimestamp* in Order Modified events reflecting the time the order was modified (e.g., the time that the order was confirmed to be modified in the firm's OMS/EMS). In this example, the *eventTimestamp* reflects the time that acknowledgement was received from the exchange. Industry Members are also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Modified event, or in a separate Order Modification Request event.

#	Step	Reported Event	Comments
1	Customer sends a new	*NA*	

#	Step	Reported Event	Comments
	GTC order to Broker 1		
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO 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: 123: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	

#	Step	Reported Event	Comments
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 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: 123:BROKER1 destination: EXCH1 destinationType: E routedOrderID: RT91235 session: s1t2 side: Buy price: 9.50 quantity: 1000 orderType: LMT timeInForce: DAY=20180418 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: 20180418T103045.723456 manualFlag: false	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
		receiverIMID: senderIMID: senderType: routedOrderID: initiator: C side: Buy price: 9.50 quantity: 900 leavesQty: 900 orderType: LMT timeInForce: GTC tradingSession: REG custDspIntrFlag: false requestTimestamp: 20180418T103045.323456	In this example, the *eventTimestamp* is the time that acknowledgement was received from the exchange, which is after the *eventTimestamp* in the corresponding Order Route event. In this example, the receipt time of the customer request is captured in the *requestTimestamp* field on the Order Modified event. Broker 1 may alternatively capture the request time using a separate Order Modification Request event.
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: 20180418T103045.523456 manualFlag: false senderIMID: 123: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***	

2.17.2. Retired Scenario

2.17.3. Retired Scenario

2.17.4. 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 4.13.2 of the CAT Reporting Technical Specifications for Industry Members for additional information.
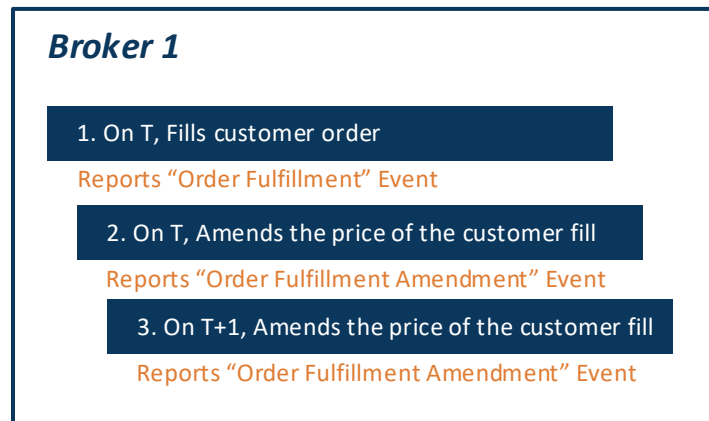
For the purpose of this example, details of order handling on the original day are not included.

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:	

#	Step	Reported Event	Comments
		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 orderID: O12345 side: B firmDetails: orderKeyDate: 20180417T000000 orderID: O999 side: SL	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.
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	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.

#	Step	Reported Event	Comments
		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	

2.17.5. Automated Investment Plan

This scenario illustrates the CAT reporting requirements when an Industry Member provides an Automated Investment Plan service, offering the ability for customers to buy securities on a recurring basis. In this scenario, two customers provide instructions to Industry Member Broker A to buy as much of security XYZ as possible for $100.00 and $50.00, respectively, on a weekly basis. Broker A aggregates both customer orders together to buy XYZ at a predetermined weekly date and time, generating a single representative order that will be used to facilitate the execution of both customer orders. The representative order is routed to an exchange where it is executed. Upon execution of the representative order, the Broker A fills each of the underlying customer orders on a Riskless Principal basis. Following the execution, the shares are then allocated to both customers participating in the Automated Investment Plan by Broker A, which is self-clearing.
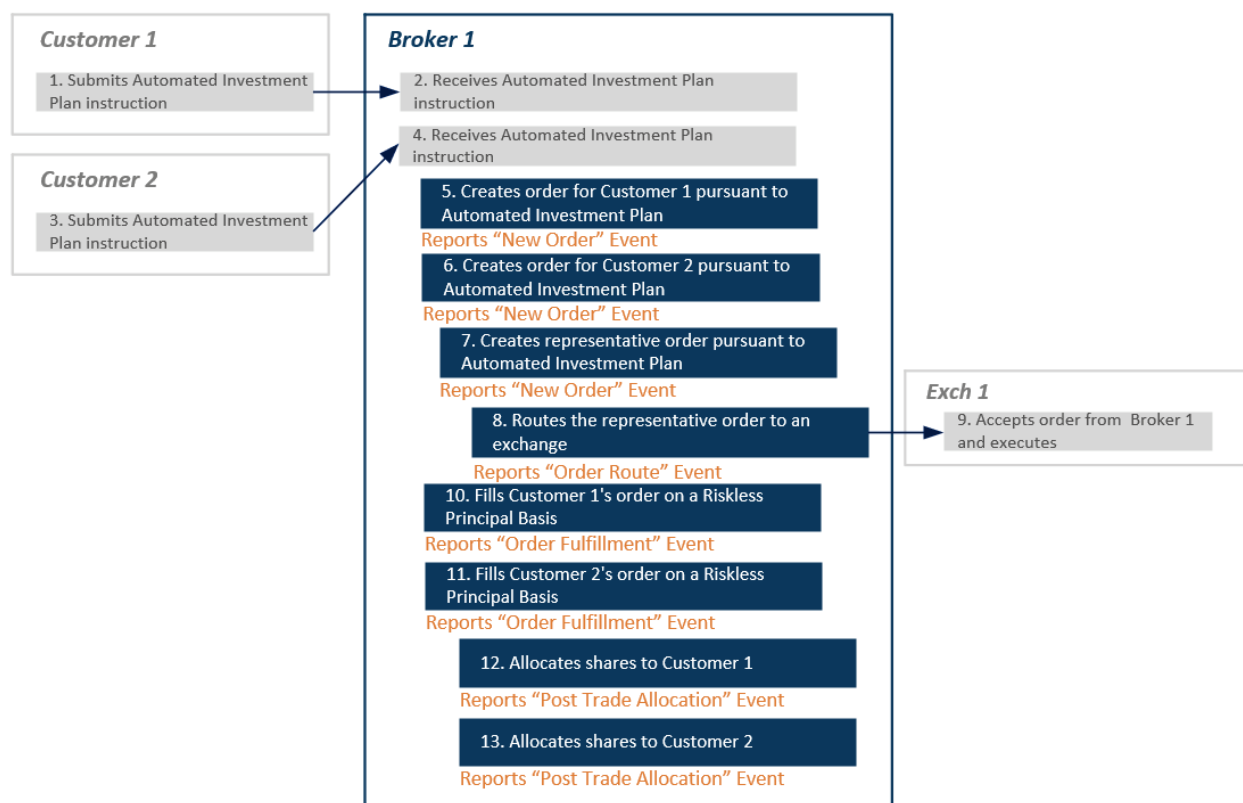
Industry Member Broker A is required to report:

- Creation of the Buy order for Customer 1 pursuant to the Automated Investment Plan (New Order event with *handlingInstructions* value of 'AIP', 'NH' and 'CASH')

- Creation of the Buy order for Customer 2 pursuant to the Automated Investment Plan (New Order events with *handlingInstructions* value of 'AIP', 'NH' and 'CASH')

- The generation of a representative order for Customers 1 and 2 (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 allocation of shares to the participating customers (Post-Trade Allocation events)

Explicit linkage between each customer order and the representative order is required in the *aggregatedOrders* field on the representative MENO and the *firmDetails* in each MEOF.

The allocation of shares to Broker A's original customers is reportable by the firm performing the allocation, which is generally the clearing or self-clearing firm processing the allocation. In this scenario, Broker A is a self-clearing firm and has the obligation to report the allocation events to CAT.

#	Step	Reported Event	Comments
1	Customer 1 instructs Broker A to participate in an Automated	*NA*	

#	Step	Reported Event	Comments
	Investment Plan		
2	Broker A creates the Buy order for Customer 1 pursuant to the Automated Investment Plan	*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: quantity: 10 orderType: MKT timeInForce: DAY=20170801 tradingSession: REG handlingInstructions: AIP|NH|CASH custDspIntrFlag: false firmDesignatedID: C123 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Broker A must populate the following *handlingInstructions* values: • 'CASH' denoting that the order is a cash order, and that Broker A is to purchase $100.00 worth of XYZ. • 'NH' denoting that this is a not held order, and that Broker A has discretion to create the order as per the Automated Investment Plan. • 'AIP' denoting that the order is associated with an Automated Investment Plan. In this example, as XYZ is trading at $10.00, Broker A calculates that a total of 10 shares can be purchased for $100.00. Refer to CAT FAQ D10 for additional information on cash orders.
3	Customer 2 instructs Broker A to participate in an Automated Investment Plan	*NA*	
4	Broker A creates the Buy order for Customer 2 pursuant to the Automated Investment Plan	*Broker A reports a **New Order event*** type: MENO orderKeyDate: 20170801T000000 orderID: O12350 symbol: XYZ eventTimestamp: 20170801T143030.123456 manualFlag: false deptType: A side: B price: quantity: 5 orderType: MKT timeInForce: DAY=20170801 tradingSession: REG handlingInstructions: AIP|NH|CASH custDspIntrFlag: false	Broker A must populate the following *handlingInstructions* values: • 'CASH' denoting that the order is a cash order, and that Broker A is to purchase $100.00 worth of XYZ. • 'NH' denoting that this is a not held order, and that Broker A has discretion to create the order as per the Automated Investment Plan. • 'AIP' denoting that the order is associated with an Automated Investment Plan. In this example, as XYZ is trading at $10.00, Broker A calculates that a total of 5 shares can be purchased for $50.00. Refer to CAT FAQ D10 for additional information on cash orders.

#	Step	Reported Event	Comments
		firmDesignatedID: C456 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
5	Broker A generates a representative order for both Customer 1 and Customer 2 pursuant to the Automated Investment Plan	*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: quantity: 15 orderType: MKT timeInForce: DAY=20170801 tradingSession: REG handlingInstructions: custDspIntrFlag: false firmDesignatedID: PROP123 accountHolderType: P affiliateFlag: false aggregatedOrders: O12345@20170801T000000@@| O12350@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. The *aggregatedOrders* field must be populated with explicit linkage to each customer order.
6	Broker A routes the representative order to an exchange for execution	*Broker A reports an **Order Route event*** type: MEOR orderKeyDate: 20170801T000000 orderID: RPO555 symbol: XYZ eventTimestamp: 20170801T143031.623456 manualFlag: false senderIMID: 123:BRKA destination: EXCH1 destinationType: E routedOrderID: S12O555	

#	Step	Reported Event	Comments
		session: 1112 side: B price: quantity: 15 orderType: MKT timeInForce: DAY=20170801 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
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: 10 price: 10.00 capacity: R fulfillmentLinkType: Y clientDetails: orderKeyDate: 20170801T000000 orderID: O12345 side: B firmDetails: orderKeyDate: 20170801T000000 orderID: RPO555 side: SL *Broker A reports an **Order Fulfillment event (2 of 2)*** type: MEOF fillKeyDate: 20170801T000000 fulfillmentID: FO55502 symbol: XYZ	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. *firmDetails* are required.

#	Step	Reported Event	Comments
		eventTimestamp: 20170801T143040.323456 manualFlag: false quantity: 5 price: 10.00 capacity: R fulfillmentLinkType: Y clientDetails: orderKeyDate: 20170801T000000 orderID: O12350 side: B firmDetails: orderKeyDate: 20170801T000000 orderID: RPO555 side: SL	
11, 12	Broker A allocates the shares to Customer 1 and Customer 2	*Broker A reports **Post-Trade Allocation events (1 of 2)*** type: MEPA allocationKeyDate: 20170801T000000 allocationID: AL12345 symbol: XYZ eventTimestamp: 20170801T200000.000000 quantity: 10 price: 10.00 side: B firmDesignatedID: C123 institutionFlag: false tradeDate: 20170801 TIDType: SSN *Broker A reports **Post-Trade Allocation events (2 of 2)*** type: MEPA allocationKeyDate: 20170801T000000 allocationID: AL98765 symbol: XYZ eventTimestamp: 20170801T200000.000000 quantity: 5	The *eventTimestamp* in the MEPA event represents the date/time that the allocation was processed. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.

#	Step	Reported Event	Comments
		price: 10.00 side: B firmDesignatedID: C456 institutionFlag: false tradeDate: 20170801 TIDType: SSN	

2.18. JSON and CSV Examples

This provides an illustration of the different reporting formats of JSON and CSV. Refer to Section 2.5 of the CAT Reporting Technical Specifications for Industry Members for additional information.

2.18.1. JSON Representation

Below is a JSON representation using the example in Scenario 2.2.2 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	{ "type": "MEOT",

#	Step	Reported Event	Comments

		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:
		    side: SL
		    firmDesignatedID: PROP123
		    accountHolderType: P
			"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":[
			  {
			  "side": "SL",
			  "firmDesignatedID":
			  "PROP123",
			  "accountHolderType": "P"
			  }
			]

2.18.2. 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. 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.
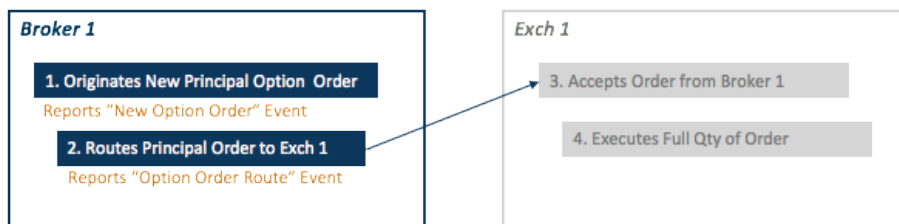
Industry Member Broker 1 is required to report:

- 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: 123: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 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	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: 123:BRKR01 destination: OPEXCH1 destinationType: E routedOrderID: RT555 session: s5 side: S price: 6.60 quantity: 30 minQty: 10 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: RAR 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.
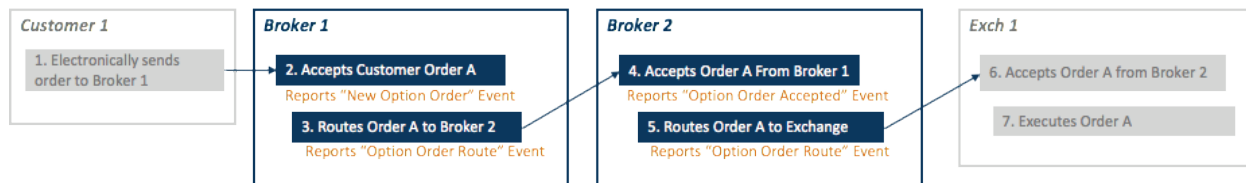
Industry Member Broker 1 is required to report:

- 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: 123:BRKR01 destination: 456: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: 456:BROKER2 senderIMID: 123: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: 456: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. Retired Scenario

3.1.5. Retired Scenario

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 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.
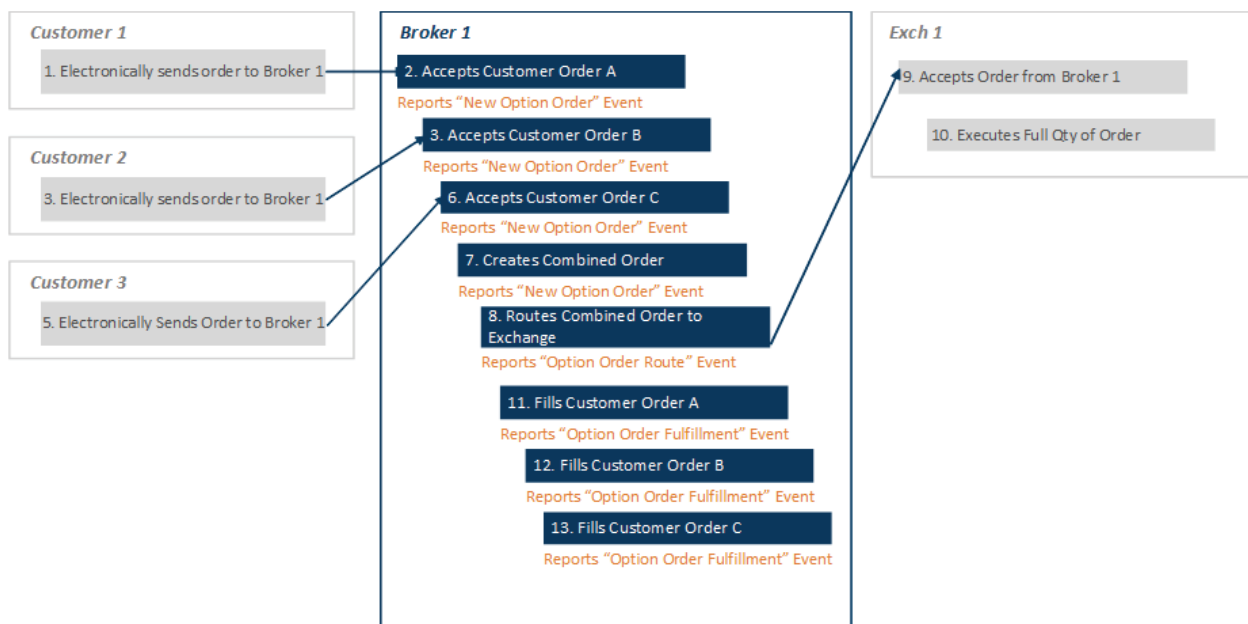
Industry Member Broker 1 is required to report:

- 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)

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 required.

#	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*** 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	

#	Step	Reported Event	Comments
		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 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	The *representativeInd* field must be populated with a value of 'O' to indicate that the order is an Options Combined Order. The *aggregatedOrders* field must be populated.

#	Step	Reported Event	Comments
		eventTimestamp: 20180516T135610.1234 deptType: A side: B price: 3.90 quantity: 300 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: NH firmDesignatedID: C0001D accountHolderType: V affiliateFlag: false aggregatedOrders: O10987@20180516T000000@@| O10988@20180516T000000@@| O10989@20180516T000000@@| openCloseIndicator: Open representativeInd: O	
8	Broker 1 routes the combined order to an Options Exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: O10990 optionID: XYZ 180906C00001875 eventTimestamp: 20180516T135610.2250 senderIMID: 123:BRKR1 destination: EXCH1 destinationType: E routedOrderID: RT01111 session: sA2 side: B price: 3.90 quantity: 300 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: NH affiliateFlag: false exchOriginCode: C :	BRKR1 is required to populate the *handlingInstructions* field with a value of "NH" on its Option Order Route event.
9	Exchange 1 accepts the order from Broker 1	*Exchange reports a **Participant Simple Option Order Accepted event***	

#	Step	Reported Event	Comments
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 firmDetails: orderKeyDate: 20180516T000000 orderID: O10990 side: S	The *fulfillmentLinkType* field must be populated with a value of 'O' indicating that this is an Options Order Fulfillment. In this scenario , the *firmDetails* are required.
12	Broker 1 fills Customer 2's order	*Broker 1 reports an **Option Order Fulfillment** event* type: MOOF fillKeyDate: 20180516T000000 fulfillmentID: FB10435 optionID: XYZ 180906C00001875 eventTimestamp: 20180516T141510.1250 quantity: 150 price: 3.90 fulfillmentLinkType: O clientDetails: orderKeyDate: 20180516T000000 orderID: O10988 side: B firmDetails: orderKeyDate: 20180516T000000 orderID: O10990 side: S	The *fulfillmentLinkType* field must be populated with a value of 'O' indicating that this is an Options Order Fulfillment. In this scenario, the *firmDetails* are required.

#	Step	Reported Event	Comments
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 firmDetails: orderKeyDate: 20180516T000000 orderID: O10990 side: S	The *fulfillmentLinkType* field must be populated with a value of 'O' indicating that this is an Options Order Fulfillment. In this scenario, the *firmDetails* are required.

3.3. Option Order Modification Scenarios

This section illustrates CAT reporting requirements for single leg option order modification scenarios. In addition to the scenarios provided below, please refer to Equity Event Section 2.4.8. 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 Requests the Modification of an Option Order that was Previously Routed to an Exchange

This scenario illustrates a customer requested modification (electronically) of an option order which the Industry Member had previously routed to an exchange.
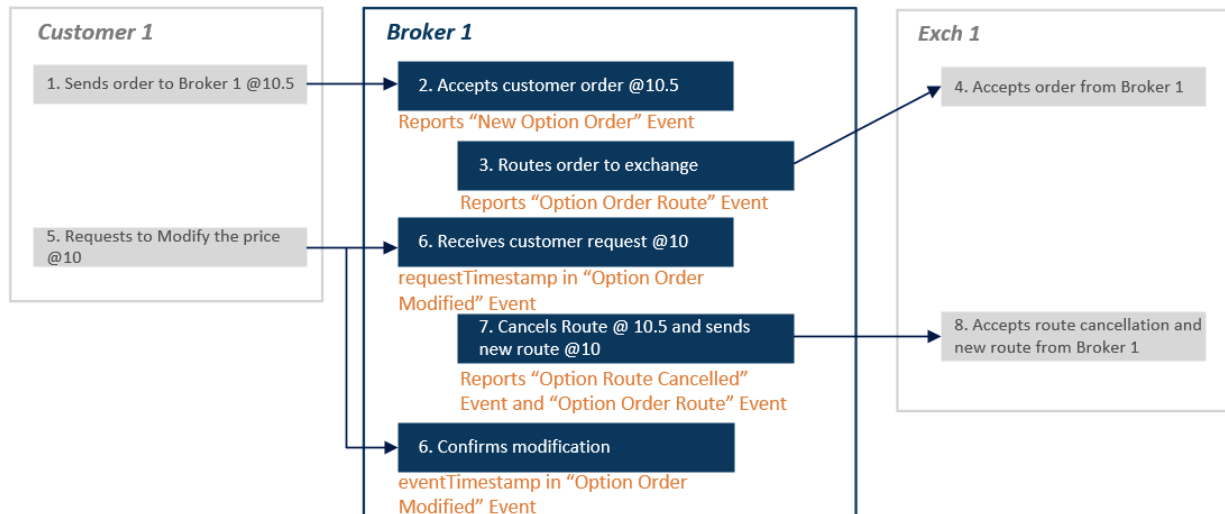
Industry Member Broker 1 is required to report:

- 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 request (*requestTimestamp* on Option Order Modified event)

- The cancellation of the original route to the exchange (Option Route Cancelled event)

- A new route to the exchange (Option Order Route event)

- The confirmation of the customer modification (*eventTimestamp* on Option Order Modified 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	

#	Step	Reported Event	Comments
		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*** type: MOOR eventTimestamp: 20180516T133031.1434 optionID: XYZ 180906C00001905 senderIMID: 123: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: NH|STP affiliateFlag: false exchOriginCode: C openCloseIndicator: Open	FIRM1 is required to populate the *handlingInstructions* 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: 20180516T133031.1600 initiator: C	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
		side: B price: 10 quantity: 50 leavesQty: 50 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: NH|STP openCloseIndicator: Open representativeInd: N requestTimestamp: 20180516T133031.1484	
7	Broker 1 routes the modification to Exchange 1	*Broker 1 reports an **Option Route Cancelled event*** type: MOCR eventTimestamp: 20180516T133031.1496 optionID: XYZ 180906C00001905 cancelQty: 50 senderIMID: 123:FIRM1 destination: EXCH1 destinationType: E orderID: OPA1740 routedOrderID: RTID201 session: s2r1 *Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: OPB1740 optionID: XYZ 180906C00001905 eventTimestamp: 20180516T133031.1500 senderIMID: 123:FIRM1 destination: EXCH1 destinationType: E routedOrderID: RTID567 session: s2r1 side: B price: 10 quantity: 50 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG	FIRM1is required to populate the *handlingInstructions* field with a value of "NH" and "STP" on its Option Order Route event.

#	Step	Reported Event	Comments
		handlingInstructions: NH|STP affiliateFlag: false exchOriginCode: C openCloseIndicator: Open	
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. 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	
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.

#	Step	Reported Event	Comments
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: 123: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: STP affiliateFlag: false exchOriginCode: C openCloseIndicator: Open	BRKR01 is required to populate the *handlingInstructions* field with a value of "STP" on its Option Order Route event.
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.
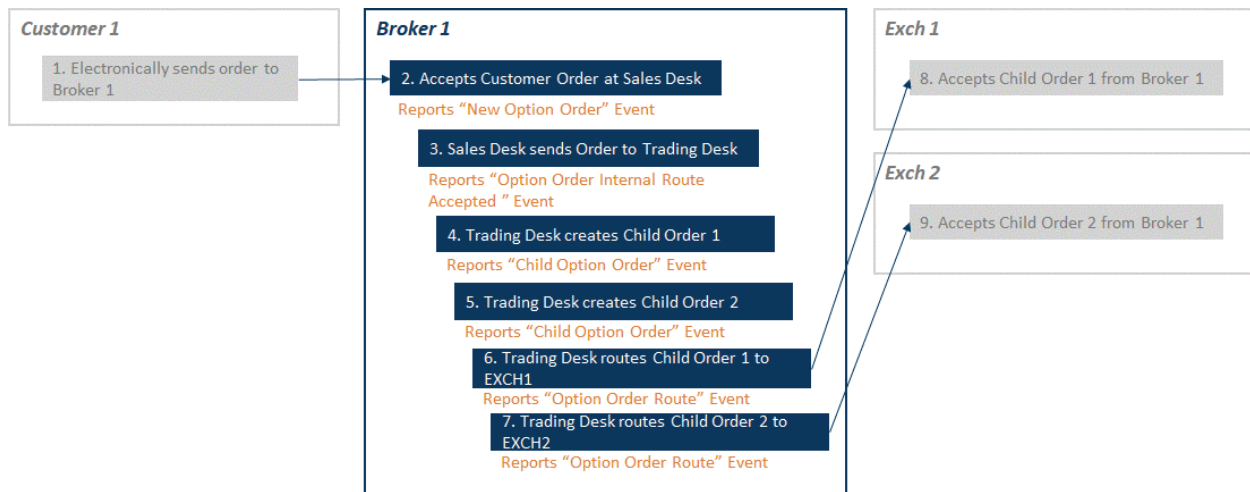
Industry Member Broker 1 is required to report:

- 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 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	

#	Step	Reported Event	Comments
		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 eventTimestamp: 20180516T133031.1260 side: B price: 8.5 quantity: 7 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* 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.
5	Trading Desk creates Child Order 2	*Broker 1 reports a **Child Option Order event (2 of 2)*** type: MOCO	Upon generation of the child order, Broker 1 assigns a new Order Key with *orderID* CO222. The Parent Order Key with *orderID*

#	Step	Reported Event	Comments
		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	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: 123:BRKR01 destination: OPEXCH1 destinationType: E routedOrderID: RT432 session: s101 side: B price: 8.5 quantity: 7 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: STP affiliateFlag: false exchOriginCode: C openCloseIndicator: Open	BRKR01 is required to populate the *handlingInstructions* field with a value of "STP" on its Option Order Route event.
7	Trading Desk routes Child Order 2 to EXCH 2	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: CO222	BRKR01 is required to populate the *handlingInstructions* field with a value of "STP" on its Option Order Route event.

#	Step	Reported Event	Comments
		optionID: XYZ 190215C00002150 eventTimestamp: 20180516T133031.1365 senderIMID: 123:BRKR01 destination: OPEXCH2 destinationType: E routedOrderID: RT369 session: s5 side: B price: 8.5 quantity: 3 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG handlingInstructions: STP affiliateFlag: false exchOriginCode: C openCloseIndicator: Open	
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.

This section will be updated with Phase 2d reporting requirements in a future iteration of this document.

3.6.1. Industry Member Receives and Routes an Exchange Defined Complex Option Order to be Executed on the Exchange

This scenario illustrates CAT reporting requirements when an Industry Member receives a complex multi-leg order from a customer electronically, and then routes the order to an exchange for execution.
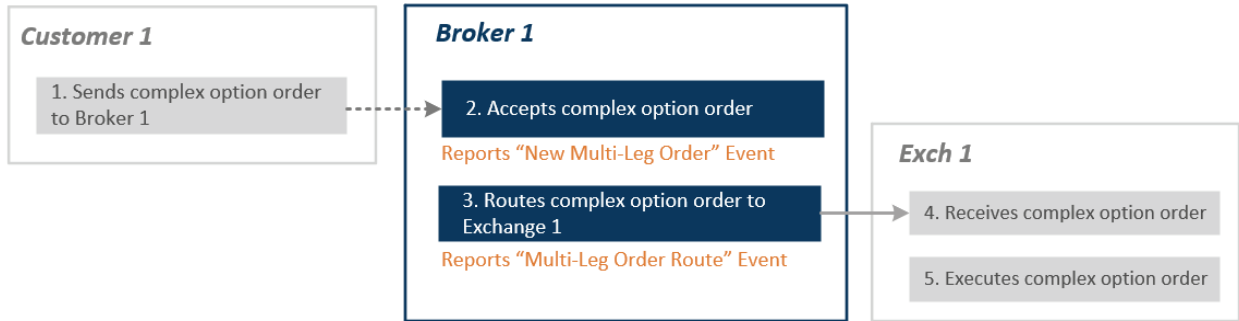
Industry Member Broker 1 is required to report:

- The electronic receipt of the customer complex order (New Multi-Leg Order event)

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

#	Step	Reported Event	Comments
1	Customer electronically sends a complex option order to Broker 1	*NA*	
2	Broker 1 (BRK1) accepts the complex option order	*Broker 1 reports a **Multi-Leg New Order event*** type: MLNO orderKeyDate: 20210222T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210222T153010.34567 manualFlag: false electronicTimestamp: 20210222T153010.34567 deptType: T price: -15.25 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: firmDesignatedID: FRM345 accountHolderType: P affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID:	

#	Step	Reported Event	Comments
		XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00030500 openCloseIndicator: Close side: S legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: SS legRatioQuantity: 45	
3	Broker 1 routes complex order to the exchange for execution	*Broker 1 reports a **Multi-Leg Order Route event*** type: MLOR orderKeyDate: 20210222T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210222T153036.323456 manualFlag: false senderIMID: 123:BRK1 destination: EXCH1 destinationType: E routedOrderID: RT343434 price: -15.25 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID:	

#	Step	Reported Event	Comments
		XYZ 210810C00030500 openCloseIndicator: Close side: S legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: SS legRatioQuantity: 45	
4	Exchange 1 accepts the Complex Option order	*Exchange 1 reports a Participant* ***Complex Option Order Accepted*** *event.*	
5	Exchange 1 executes the Complex Option order	*Exchange 1 reports a Participant* ***Option Trade events***	

3.6.2. Industry Member Receives a Complex Option Order Which is worked as Individual Single Order Legs in the Customer's Account

This scenario illustrates CAT reporting requirements when an Industry Member receives a complex option order from a customer, but routes the individual leg orders to external execution venues.
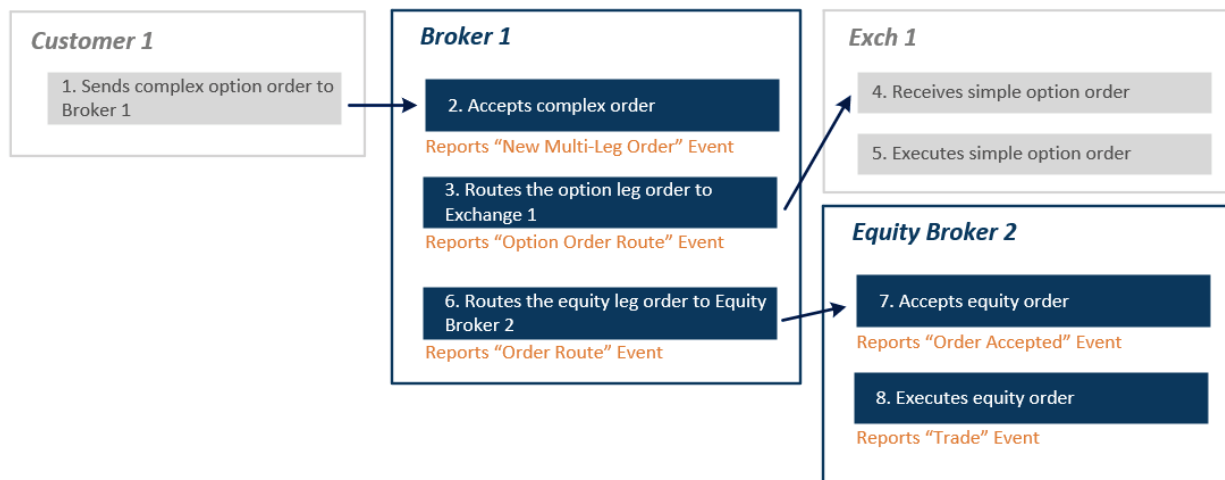
Industry Member Broker 1 is required to report:

- The receipt of the complex option order from the customer (Multi-Leg New Order event)
- The route of the single leg option order to the exchange (Option Order Route event)
- The route of the equity leg order to Equity Broker 2 (Equity Order Route event)

Industry Member Equity Broker 2 is required to report:

- The receipt of the equity order from Broker 1 (Equity Order Accept event)
- The execution of the order from Broker 1 (Trade event)

#	Step	Reported Event	Comments
1	Customer sends a complex option order to Broker 1	*NA*	
2	Broker 1 accepts the complex option order	*Broker 1 reports a **Multi-Leg New Order event*** type: MLNO orderKeyDate: 20210222T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210222T095512.357684 manualFlag: false deptType: T price: 32.75 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: firmDesignatedID: FRM345 accountHolderType: P affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: S legRatioQuantity: 1 legRefID: 2 symbol: XYZ side: B legRatioQuantity: 75	
3	Broker 1 routes option leg to Exchange 1	*Broker 1 reports an **Option Order Route event***	The *multiLegInd* must be populated as 'true' to indicate that the immediately preceding event in the

#	Step	Reported Event	Comments
		type: MOOR orderKeyDate: 20210222T000000 orderID: CO12345 optionID: XYZ 210810C00032000 eventTimestamp: 20210222T095603.768455 senderIMID: 123:BKR1 destination: EXCH1 destinationType: E routedOrderID: RTOPTLA1 session: s.012.5 side: S price: 1.25 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG exchOriginCode: P affiliateFlag: false openCloseIndicator: Open multiLegInd: true	order life cycle is a Multi-Leg order event.
4	Broker 1 routes Equity Leg to Equity Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20210222T000000 orderID: CO12345 symbol: XYZ eventTimestamp: 20210222T095641.845584 senderIMID: 123:BKR1 destination: 456:EBK2 destinationType: F routedOrderID: RTEQLB1 side: B price: 33 quantity: 7500 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG exchOriginCode: P affiliateFlag: false handlingInstructions: OPT multiLegInd: true	The *multiLegInd* must be populated as 'true' to indicate that the immediately preceding event in the order life cycle is a Multi-Leg order event. Broker 1 is required to report a *handlingInstructions* value of 'OPT' to indicate that the order is an options related transaction
5	Exchange 1 accepts option order from	*Exchange 1 reports a Participant **Simple Option Order Accepted***	

#	Step	Reported Event	Comments
	Broker 1	*event*	
6	Exchange 1 executes the option order	*Exchange 1 reports a Participant **Simple Option Trade event***	
7	Equity Broker 2 accepts equity order from Broker 1	*Equity Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20210222T000000 orderID: EO112233 symbol: XYZ eventTimestamp: 20210222T095641.984213 manualFlag: false receiverIMID: 456:EBK2 senderIMID: 123:BKR1 senderType: F routedOrderID: RTEQLB1 affiliateFlag: false deptType: T side: B price: 33 quantity: 7500 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG isoInd: NA custDspIntrFlag: false	
8	Equity Broker 2 executes equity order	*Equity Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20210222T000000 tradeID: TXYZ123 symbol: XYZ eventTimestamp: 20210222T095641.684213 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 7500 price: 33 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails:	Broker 2 executes Order EO112233 against EO112234

#	Step	Reported Event	Comments
		orderKeyDate: 20210222T000000 orderID: EO112233 side: B sellDetails: orderKeyDate: 20210222T000000 orderID: EO112234 side: SL	

3.6.3. Industry Member Receives a Complex Order Manually Followed by Individual FIX Messages for Each Leg

This scenario illustrates CAT reporting requirements when an Industry Member Broker 2 receives a complex/multi-leg order from a customer verbally from Industry Member Broker 1, then receives individual FIX order messages electronically for each of the leg components. In this scenario, the Industry Member 1 is unable to send multi-leg order messages electronically due to system limitations and can only send individual leg orders electronically via FIX.

Both Industry Members are required to report the manual route/receipt of the complex order using a multi-leg order event. The order is considered routed/received once all the terms of the order are agreed, including all leg details and the net price. This is true whether electronic FIX messages are sent/received prior to or after the complete order instruction from the client.
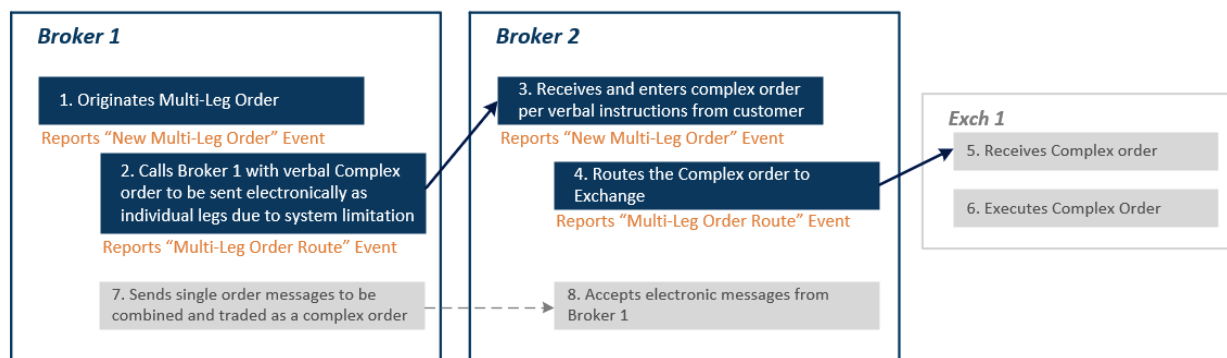
Industry Member Broker 1 is required to report:

- The origination of the complex option order (Multi-Leg New Order event)
- The route of the complex option order to Broker 2 (Multi-Leg Order Route event)

Industry Member Broker 2 is required to report:

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

Industry Member Broker 1 is NOT required to report:

- The individual leg orders sent electronically to Broker 2

Industry Member Broker 2 is NOT required to report:
- The receipt of the individual leg orders received electronically from Broker 1
- Any trade/fulfillment events on the individual leg orders.

If either Industry Member chooses to report order events for the individual leg messages, the *handlingInstructions* field must be populated with a value of 'CMPX'. If Broker 2 received the order from a customer that was not a CAT reporter, then Broker 2 must follow the same guidance using a Multi-Leg New Order event instead of a Multi-Leg Order Accepted event.

#	Step	Reported Event	Comments
1	Broker 1 (BRK1) originates a multi-leg order	*Broker 1 reports a **Multi-Leg New Order event** for the complex option order* type: MLNO orderKeyDate: 20210222T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210222T152005 manualFlag: true electronicTimestamp: 20210222T153010.34567 deptType: T price: -15.25 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: firmDesignatedID: FRM345 accountHolderType: P affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00030500 openCloseIndicator: Close side: S legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: SS legRatioQuantity: 45	

#	Step	Reported Event	Comments
2	Broker 1 (BRK1) calls and gives verbal instructions to trade a complex option order with equity leg to Broker 2 (BRK2)	*Broker 1 reports a **Multi-Leg Order Route event** for the complex option order* type: MLOR orderKeyDate: 20210222T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210222T153036 manualFlag: true senderIMID: 123:BRK1 destination: 345:BRK2 destinationType: F routedOrderID: price: -15.25 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00030500 openCloseIndicator: Close side: S legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: SS legRatioQuantity: 45	Because the complex order instructions are sent verbally, this order is marked with the manualFlag set to 'true'. The *routedOrderID* field is not required on manual routes. Broker 1 is required to populate the *eventTimestamp* field to the second or any greater available granularity.
3	Broker 2 (BRK2) accepts the complex option order	*Broker 2 reports a **Multi-Leg Order Accepted event** for the complex option order* type: MLOA orderKeyDate: 20210222T000000	Because the complex order instructions are received verbally, this order is marked with the manualFlag set to 'true'. The *routedOrderID* field is not required on manual routes. Broker 2

#	Step	Reported Event	Comments
		orderID: CO34567 underlying: XYZ eventTimestamp: 20210222T152005 manualFlag: true electronicTimestamp: 20210222T153010.34567 receiverIMID: 345:BRK2 senderIMID: 123:BRK1 senderType: F routedOrderID: deptType: T price: -15.25 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: firmDesignatedID: FRM345 accountHolderType: P affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00030500 openCloseIndicator: Close side: S legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: SS legRatioQuantity: 45	is required to populate the *eventTimestamp* field to the second or any greater available granularity. The *electronicTimestamp* field must be populated with the time that Broker 2 systematized the order.
4	Broker 2 routes complex order to the exchange for execution	*Broker 2 reports a **Multi-Leg Order Route event** for the complex option order*	

#	Step	Reported Event	Comments
		type: MLOR orderKeyDate: 20210222T000000 orderID: CO34567 underlying: XYZ eventTimestamp: 20210222T153036.323456 manualFlag: false senderIMID: 345:BRK2 destination: EXCH1 destinationType: E routedOrderID: RT343434 price: -15.25 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00030500 openCloseIndicator: Close side: S legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: SS legRatioQuantity: 45	
6	Exchange 1 accepts the order from Broker 2	*Exchange 1 reports a Participant* ***Complex Option Order Accepted event***	
7	Exchange 1 executes the complex option order	*Exchange 1 reports a Participant* ***Option Trade events***	
8	Broker 1 originates the electronic simple option order for each leg	*The preferred method is for Broker 1 to suppress any CAT event for these leg orders that do not represent the full order.*	If the IM is unable to suppress the electronic single leg orders, the handlingInstructions field must be populated with a value of 'CMPX' to indicate that the order is part of a

#	Step	Reported Event	Comments
			complex order
		If Broker 1 elects to report the MONO/MENO events, the handlingInstructions field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order	
		*Broker 1 Reports a **New Option Order event (1/3)***	
		type: MONO orderKeyDate: 20210222T000000 orderID: O12346 optionID: XYZ 210810C00032000 eventTimestamp: 20210222T153020.123456 electronicDupFlag: false deptType: T side: B quantity: 100 orderType: MKT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: CMPX firmDesignatedID: FRM345 accountHolderType: P affiliateFlag: false openCloseIndicator: Open representativeInd: N	
		*Broker 1 Reports a **New Option Order event (2/3)***	
		type: MONO orderKeyDate: 20210222T000000 orderID: O12347 optionID: XYZ 210810C00030500 eventTimestamp: 20210222T153023.123456 electronicDupFlag: false deptType: T side: S quantity: 100 orderType: MKT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: CMPX firmDesignatedID: FRM345	

#	Step	Reported Event	Comments
		accountHolderType: P affiliateFlag: false openCloseIndicator: Close representativeInd: N *Broker 1 Reports a **New Order** event (3/3)* type: MENO orderKeyDate: 20210222T000000 orderID: O12348 symbol: XYZ eventTimestamp: 20210222T153027.123456 electronicDupFlag: false deptType: T side: SS quantity: 4500 orderType: MKT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: CMPX firmDesignatedID: FRM345 accountHolderType: P affiliateFlag: false representativeInd: N	
9	Broker 1 routes the electronic simple option order for each leg to Broker 2	*The preferred method is for Broker 1 to suppress any CAT event for these leg orders that do not represent the full order.* *If Broker 1 elects to report the MOOR/MEOR events, the handlingInstructions field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order* *Broker 1 Reports an **Option Order Route** event (1/3)* type: MOOR orderKeyDate: 20210222T000000 orderID: O123456 optionID: XYZ 210810C00032000 eventTimestamp: 20210222T153020.123456	If the IM is unable to suppress the electronic single leg orders, the handlingInstructions field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order. Unlinked feedback will not be provided on route events with a *handlingInstructions* value of 'CMPX'.

#	Step	Reported Event	Comments
		manualFlag: false senderIMID: 123:BRK1 destination: 345:BRK2 destinationType: F routedOrderID: AO226 side: B price: quantity: 100 orderType: MKT timeInForce: DAY=20210222 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: CMPX *Broker 1 Reports an **Option Order Route** event (2/3)* type: MOOR orderKeyDate: 20210222T000000 orderID: O123457 optionID: XYZ 210810C00030500 eventTimestamp: 20210222T153023.123456 manualFlag: false senderIMID: 123:BRK1 destination: 345:BRK2 destinationType: F routedOrderID: AO227 side: S price: quantity: 100 orderType: MKT timeInForce: DAY=20210222 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: CMPX *Broker 1 Reports an **Order Route** event (3/3)* type: MEOR orderKeyDate: 20210222T000000 orderID: O123458 symbol: XYZ eventTimestamp: 20210222T153027.123456	

#	Step	Reported Event	Comments
		manualFlag: false senderIMID: 123:BRK1 destination: 345:BRK2 destinationType: F routedOrderID: RTCO12345 side: SS price: quantity: 4500 orderType: MKT timeInForce: DAY=20210222 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: CMPX	
10	Broker 2 accepts the electronic simple option order for each leg from Broker 1	*The preferred method is for Broker 2 to suppress any CAT event for these leg orders that do not represent the full order.* *If Broker 2 elects to report the MOOA/MEOA events, the handlingInstructions field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order* *Broker 1 Reports an* **Option Order Accepted event (1/3)** type: MOOA orderKeyDate: 20210222T000000 orderID: ZZ123 optionID: XYZ 210810C00032000 eventTimestamp: 20210222T153020.123456 manualFlag: false receiverIMID: 345:BRK2 senderIMID: 123:BRK1 senderType: F routedOrderID: AO226 affiliateFlag: false deptType: T side: B price: quantity: 100 orderType: MKT timeInForce: DAY=20210222 tradingSession: REG	If the IM is unable to suppress the electronic single leg orders, the handlingInstructions field must be populated with a value of 'CMPX' to indicate that the order is part of a complex order. Unlinked feedback will not be provided on order accepted events with a *handlingInstructions* value of 'CMPX'.

#	Step	Reported Event	Comments
		isoInd: NA handlingInstructions: CMPX custDspIntrFlag: false *Broker 1 Reports an **Option Order Accepted event (2/3)*** type: MOOA orderKeyDate: 20210222T000000 orderID: ZZ124 optionID: XYZ 210810C00030500 eventTimestamp: 20210222T153023.123456 manualFlag: false receiverIMID: 345:BRK2 senderIMID: 123:BRK1 senderType: F routedOrderID: AO227 affiliateFlag: false deptType: T side: S price: quantity: 100 orderType: MKT timeInForce: DAY=20210222 tradingSession: REG isoInd: NA handlingInstructions: CMPX custDspIntrFlag: false *Broker 1 Reports an **Order Route event (3/3)*** type: MEOA orderKeyDate: 20210222T000000 orderID: ZZ125 symbol: XYZ eventTimestamp: 20210222T153027.123456 manualFlag: false receiverIMID: 345:BRK2 senderIMID: 123:BRK1 senderType: F routedOrderID: RTCO12345 affiliateFlag: false deptType: T side: SS	

#	Step	Reported Event	Comments
		price: quantity: 4500 orderType: MKT timeInForce: DAY=20210222 tradingSession: REG isoInd: NA handlingInstructions: CMPX custDspIntrFlag: false	

3.6.4. Retired Scenario

3.6.5. Complex Order is Routed as a Pair to an Exchange for Execution

This scenario illustrates the CAT reporting requirements when an Industry Member routes an exchange defined complex order to an exchange as a pair for execution. In this scenario, Broker 1 receives a customer order for an exchange defined complex option. Broker 1 originates a proprietary order to take the other side, and routes the orders as a pair to an exchange for execution.
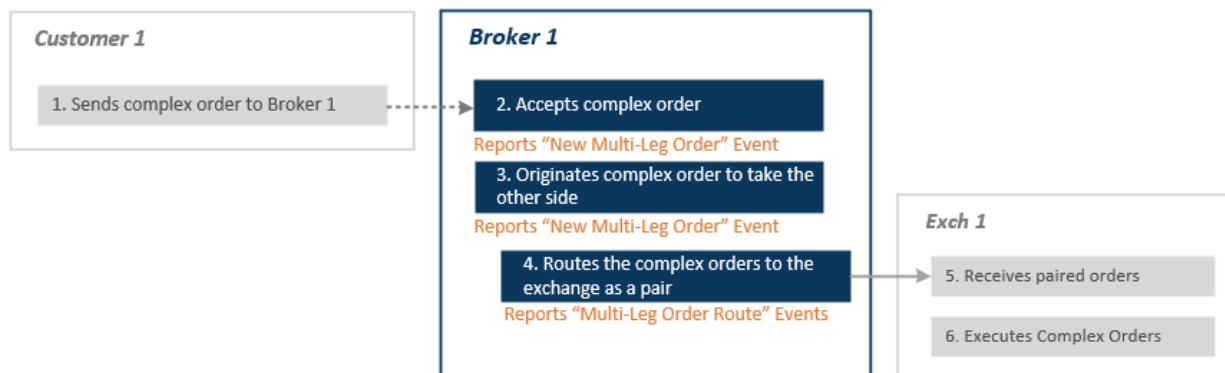
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Multi-Leg Order event)
- The origination of the proprietary order (New Multi-Leg Order event)
- The route of the multi-leg orders to the exchange as a pair (Multi-Leg Order Route events)

Since the multi-leg orders were routed to the exchange as a pair, both Order Route events must contain the same *pairedOrderID*.

#	Step	Reported Event	Comments
1	Broker 1 receives a customer order	*Broker 1 reports a* **New Multi-Leg Order event** type: MLNO	

#	Step	Reported Event	Comments
		orderKeyDate: 20180417T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20180417T153035.123456 manualFlag: false deptType: A price: -10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: firmDesignatedID: CUS123 accountHolderType: A affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 symbol: XYZ side: SL legRatioQuantity: 100 legRefID: 2 optionID: XYZ 180810C00001925 side: B legRatioQuantity: 1	
2	Broker 1 originates a proprietary order	*Broker 1 reports a **New Multi-Leg Order event*** type: MLNO orderKeyDate: 20180417T000000 orderID: O9876 underlying: XYZ eventTimestamp: 20180417T153037.523456 manualFlag: false deptType: A price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180417	

#	Step	Reported Event	Comments
		tradingSession: REG handlingInstructions: firmDesignatedID: FRM345 accountHolderType: P affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 symbol: XYZ side: B legRatioQuantity: 100 legRefID: 2 optionID: XYZ 180810C00001925 side: S legRatioQuantity: 1	
3	Broker 1 routes the multi-leg orders to the exchange as a pair	*Broker 1 reports a **Multi-Leg Order Route event (1/2)*** type: MLOR orderKeyDate: 20180417T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20180417T153038.223456 manualFlag: false senderIMID: 123:BRKA destination: EXCH1 destinationType: E routedOrderID: 55555 session: SESS-01 price: -10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: affiliateFlag: false pairedOrderID: PAIR1234 numberOfLegs: 2 priceType: PU legDetails:	Since the orders were routed to the exchange as a pair, both routes must contain the same *pairedOrderID*.

#	Step	Reported Event	Comments
		legRefID: 1 symbol: XYZ side: SL legRatioQuantity: 100 legRefID: 2 optionID: XYZ 180810C00001925 side: B legRatioQuantity: 1 *Broker 1 reports a **Multi-Leg Order Route event (2/2)*** type: MLOR orderKeyDate: 20180417T000000 orderID: O9876 underlying: XYZ eventTimestamp: 20180417T153038.223456 manualFlag: false senderIMID: 123:BRKA destination: EXCH1 destinationType: E routedOrderID: 99999 session: SESS-01 price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: affiliateFlag: false pairedOrderID: PAIR1234 numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 symbol: XYZ side: B legRatioQuantity: 100 legRefID: 2 optionID: XYZ 180810C00001925 side: S legRatioQuantity: 1	

3.6.6. Industry Member Receives a Complex Option Order and Routes Option Legs as QCC to an Exchange

This scenario illustrates CAT reporting requirements when an Industry Member receives a complex option order from a customer, and routes the option legs to an exchange as a Qualified Contingent Cross ("QCC").

In this scenario, an Industry Member receives an order from a customer to trade a complex option. The Industry Member creates a proprietary order to take the other side. The option legs are routed to an exchange as a paired complex order for further execution. The equity legs are routed to Equity Broker 2 for further execution.
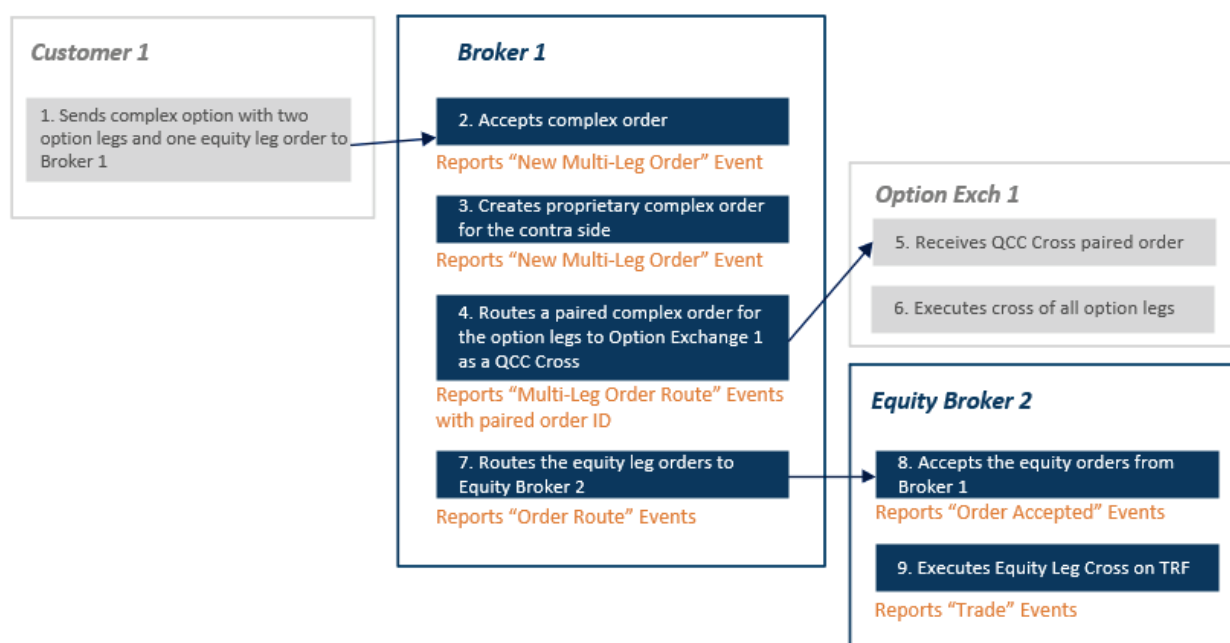
Industry Member Broker 1 is required to report:

- The receipt of the complex option order from the customer (Multi-Leg New Order event)
- The creation of the new proprietary order (Multi-Leg New Order event)
- The route of the paired complex option orders to the Option Exchange (Multi-Leg Order Route events with the same *pairedOrderID*)
- The routes of the equity leg orders to Equity Broker 2 (Order Route events)

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

In this scenario, Broker 1 receives a complex order and originates a contra-side order with two option legs and one equity legs. The *numberOfLegs* field must be populated with a value of '3', and the *legDetails* must reflect the details of each leg. Broker 1 then routes the equity legs to an equity broker for crossing, and routes the option legs as a paired complex order to the exchange. The Multi-Leg Order Route events reported by Broker 1 must reflect the *numberOfLegs* field with a value of '2', and the *legDetails* must reflect the details of each option leg.

While the *numberOfLegs* is different on the Multi-Leg New Order events and related Multi-Leg Order Route events, this will be accepted by CAT and will not result in any errors, as *legDetails* are not used for intrafirm linkage.

#	Step	Reported Event	Comments
1	Customer sends a complex option order to Broker 1	*NA*	
2	Broker 1 accepts the complex option order	*Broker 1 reports a **Multi-Leg New Order** event* type: MLNO orderKeyDate: 20210324T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210324T095512.357684 manualFlag: false deptType: T price: 32.75 quantity: 1000 orderType: LMT timeInForce: DAY=20210324 tradingSession: REG handlingInstructions: firmDesignatedID: CUS123 accountHolderType: A affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: S legRatioQuantity: 1	

#	Step	Reported Event	Comments
		legRefID: 2 optionID: XYZ 210810C00035000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: B legRatioQuantity: 27	
3	Broker 1 originates a proprietary order for the contra side of the customer order	*Broker 1 reports a **Multi-Leg New Order** event* type: MLNO orderKeyDate: 20210324T000000 orderID: P222444 underlying: XYZ eventTimestamp: 20210324T095729.152684 manualFlag: false deptType: A price: -32.75 quantity: 1000 orderType: LMT timeInForce: DAY=20210324 tradingSession: REG handlingInstructions: firmDesignatedID: FRM345 accountHolderType: P affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00035000	

#	Step	Reported Event	Comments
		openCloseIndicator: Open side: S legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: SL legRatioQuantity: 27	
4	Broker 1 routes a paired QCC order for the option legs only to Option Exchange 1	*Broker 1 reports a **Multi-Leg Order Route event (1/2)*** type: MLOR orderKeyDate: 20210324T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210324T153038.223456 manualFlag: false senderIMID: 123:BRKA destination: EXCH1 destinationType: E routedOrderID: 55555 session: SESS-01 price: -3.25 quantity: 1000 orderType: LMT timeInForce: DAY=20210324 tradingSession: REG handlingInstructions: QCC affiliateFlag: false pairedOrderID: PAIR1234 numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: S legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00035000 openCloseIndicator: Open side: B legRatioQuantity: 1	The price field on these paired route events must represent the net price for the included option legs only. Broker 1 is not required to populate a *handlingInstructions* value of 'TTS' (Tied to Stock), as 'TTS' is not required to be captured on multi-leg order events. Refer to CAT FAQ B71 for additional information. The *pairedOrderID* field must be populated with the same value on each MLOR event. The *handlingInstructions* field must be populated with a value of 'QCC' to indicate that the order was routed as a qualified contingent cross.

#	Step	Reported Event	Comments
		*Broker 1 reports a **Multi-Leg Order Route event (2/2)*** type: MLOR orderKeyDate: 20210324T000000 orderID: P222444 underlying: XYZ eventTimestamp: 20210324T153038.223456 manualFlag: false senderIMID: 123:BRKA destination: EXCH1 destinationType: E routedOrderID: 99999 session: SESS-01 price: 3.25 quantity: 1000 orderType: LMT timeInForce: DAY=20210324 tradingSession: REG handlingInstructions: QCC affiliateFlag: false pairedOrderID: PAIR1234 numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00035000 openCloseIndicator: Open side: S legRatioQuantity: 1	
5	Exchange 1 accepts the paired complex order from Broker 1	*Exchange 1 reports a Participant **Complex Option Order Accepted events***	
6	Exchange 1 executes the complex option orders	*Exchange 1 reports a Participant **Option Trade events***	

#	Step	Reported Event	Comments
7	Broker 1 routes equity leg orders to Equity Broker 2 to be crossed	*Broker 1 reports an* **Equity Order Route event (1/2)** type: MEOR orderKeyDate: 20210324T000000 orderID: CO12345 symbol: XYZ eventTimestamp: 20210324T153118.345122 manualFlag: false senderIMID: 123:BRKA destination: 456: EQB2 destinationType: F routedOrderID: RTCO12345 side: SL price: 29.50 quantity: 27000 orderType: LMT timeInForce: DAY=20210324 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: OPT|QCC multiLegInd: true *Broker 1 reports an* **Equity Order Route event (2/2)** type: MEOR orderKeyDate: 20210324T000000 orderID: P222444 symbol: XYZ eventTimestamp: 20210324T153118.345122 manualFlag: false senderIMID: 123:BRKA destination: 456: EQB2 destinationType: F routedOrderID: RTP222444 side: B price: 29.50 quantity: 27000 orderType: LMT timeInForce: DAY=20210324 tradingSession: REG affiliateFlag: false isoInd: NA	The *price* field must be populated for the equity transaction. Broker 1 is required to report a *handlingInstructions* value of 'OPT' to indicate that the order is an options related transaction, and a value of 'QCC' to indicate that the route was related to an order sent as a QCC. The multiLegInd must be populated as 'true' to indicate that the immediately preceding event in the order life cycle is a Multi-Leg order event.

#	Step	Reported Event	Comments
		handlingInstructions: OPT|QCC multiLegInd: true	
8	Equity Broker 2 accepts the orders from Broker 1	*Broker 2 reports an **Order Accepted event (1/2)*** type: MEOA orderKeyDate: 20210324T000000 orderID: 210222-123123 symbol: XYZ eventTimestamp: 20210324T153118. 512872 manualFlag: false receiverIMID: 456:EQB2 senderIMID: 123:BRKA senderType: F routedOrderID: RTCO12345 affiliateFlag: false deptType: A side: SL price: 29.50 quantity: 27000 orderType: LMT timeInForce: DAY=20210324 tradingSession: REG isoInd: NA handlingInstructions: OPT|QCC custDspIntrFlag: false *Broker 2 reports an **Order Accepted event (2/2)*** type: MEOA orderKeyDate: 20210324T000000 orderID: 210222-123234 symbol: XYZ eventTimestamp: 20210324T153118. 512872 manualFlag: false receiverIMID: 456:EQB2 senderIMID: 123:BRKA senderType: F routedOrderID: RTP222444 affiliateFlag: false deptType: A side: B price: 29.50 quantity: 27000	Broker 2 is required to report a *handlingInstructions* value of 'OPT' to indicate that the order is an options related transaction, and a value of 'QCC' to indicate that the route was related to an order sent as a QCC.

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20210324 tradingSession: REG isoInd: NA handlingInstructions: OPT|QCC custDspIntrFlag: false	
9	Equity Broker 2 crosses the orders	*Equity Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20210324T000000 tradeID: TXYZ124 symbol: XYZ eventTimestamp: 20210324T153356. 234561 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 27000 price: 29.50 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20210324T000000 orderID: 210222-123234 side: B sellDetails: orderKeyDate: 20210324T000000 orderID: 210222-123123 side: SL	

3.6.7. Industry Member Receives a Complex Option Order with Different Leg Ratio Format

This scenario illustrates CAT reporting requirements when an Industry Member receives a complex option order from a customer with leg ratio specified as the full leg quantity, but must reduce the leg ratios to their simplest form (sometimes known as "Lowest Common Factor" or "LCF") in order to route the order to an exchange.
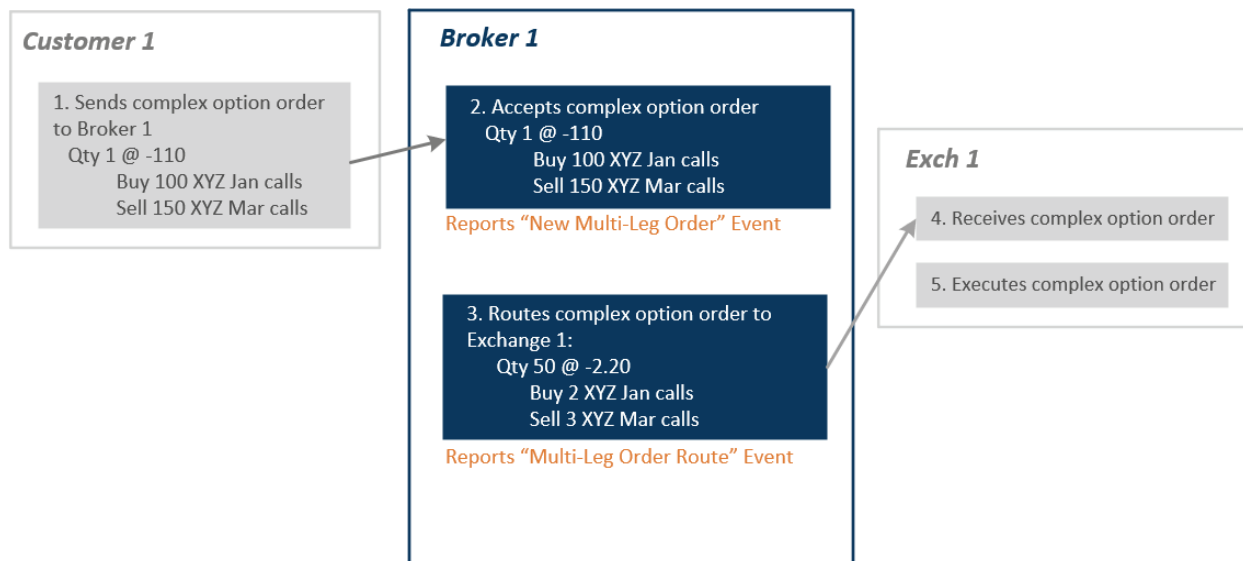
In the example above, the customer entered an order to buy 100 contracts of leg 1 and sell 150 contracts of leg 2. Most exchange protocols require that complex option orders be sent with the leg ratio reduced to the smallest possible whole numbers, so Broker 1 must calculate the LCF and route the order to the exchange using this format. In this example, they reduce the leg ratios from 100/150 to 2/3, and increase the order quantity accordingly (from 1 to 50).

The net price was also mathematically translated to the new "Per Unit" amount in this example, but FINRA CAT will accept any valid priceType in the spec data dictionary. The net price format is not tied to the leg ratio format. CAT reporters should report these values exactly as they are sent on the order.

Industry Member Broker 1 is required to report:

- The receipt of the complex option order from the customer (Multi-Leg New Order event)
- The route of the order to the Option Exchange (Multi-Leg Order Route event)

#	Step	Reported Event	Comments
1	Customer sends a complex option order to Broker 1	*NA*	
2	Broker 1 accepts the complex option order	*Broker 1 reports a **Multi-Leg New Order** event* type: MLNO orderKeyDate: 20210324T000000 orderID: CO12345 underlying: XYZ	

#	Step	Reported Event	Comments
		eventTimestamp: 20210324T095512.357684 manualFlag: false deptType: T price: -110 quantity: 1 orderType: LMT timeInForce: DAY=20210324 tradingSession: REG handlingInstructions: firmDesignatedID: CUS123 accountHolderType: A affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 symbol: XYZ 220123C00055000 openCloseIndicator: Close side: B legRatioQuantity: 100 legRefID: 2 symbol: XYZ 220318C00055000 openCloseIndicator: Close side: S legRatioQuantity: 150	
4	Broker 1 transforms the quantity and limit price and routes the complex option order to Option Exchange 1	*Broker 1 reports a **Multi-Leg Order Route event*** type: MLOR orderKeyDate: 20210324T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210324T153038.223456 manualFlag: false senderIMID: 123:BRKA destination: EXCH1 destinationType: E routedOrderID: 55555 session: SESS-01 price: -2.20 quantity: 50	Both the *quantity* field at the order level and the *legRatioQuantity* fields in the *legDetails* block have been updated to the format in the LCF as required by the exchange. In this case, the *price* field was also updated to reflect the "Per Unit" price of the new unit size (e.g., 2 x 3).

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20210324 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 symbol: XYZ 220123C00055000 openCloseIndicator: Close side: B legRatioQuantity: 2 legRefID: 2 symbol: XYZ 220318C00055000 openCloseIndicator: Close side: S legRatioQuantity: 3	
5	Exchange 1 accepts the order from Broker 1	*Exchange 1 reports a Participant* ***Complex Option Order Accepted events***	
6	Exchange 1 executes the complex option order	*Exchange 1 reports Participant* ***Option Trade events***	

3.6.8. Industry Member Cancels a Previously Routed Complex Order

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

In this scenario, an Industry Member receives a complex order from a customer electronically, and then routes the order to an exchange for execution. The industry member receives a subsequent cancel request from the customer and cancels the previously routed order.
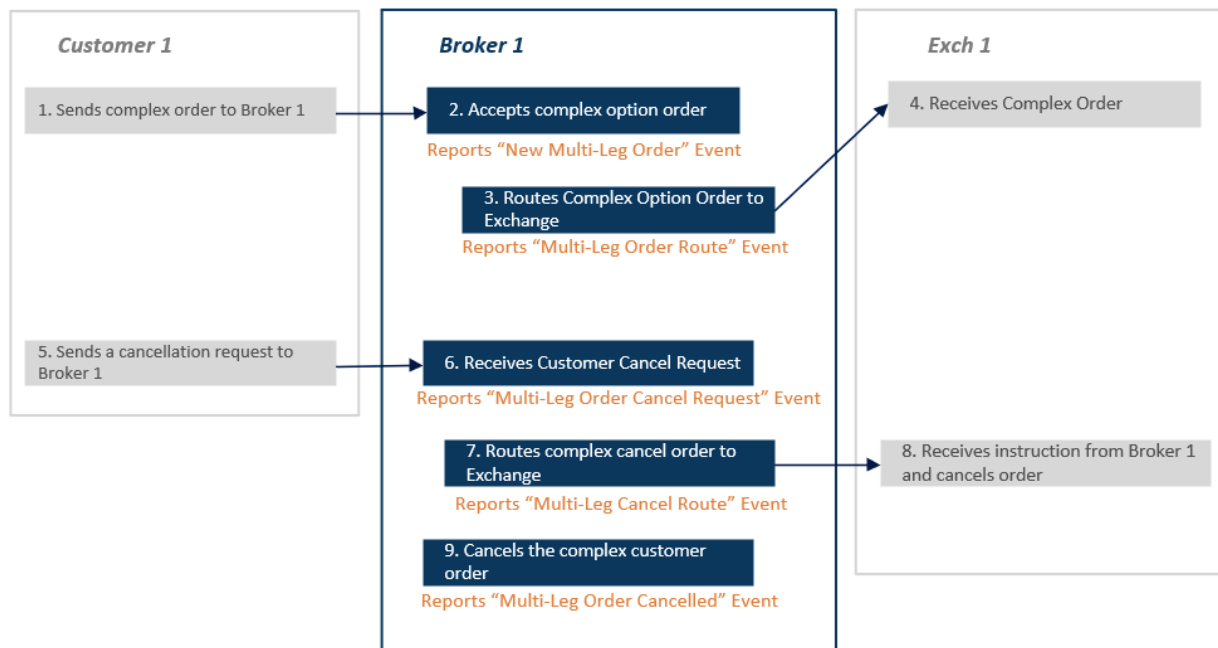
Industry Member Broker 1 is required to report:

- The receipt of the complex order from the customer (New Multi-Leg Order event)

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

- The receipt of the complex order cancellation request from the customer (Multi-Leg Order Cancel Request event)

- The cancellation of the complex exchange route (Multi-Leg Cancel Route event)

- The confirmation of the cancellation of the complex order (Multi-Leg Order Cancel event)

Industry Members are required to capture the *eventTimestamp* in Multi-Leg Order Cancelled events reflecting the time the order was cancelled (e.g., the time that the order was confirmed to be cancelled in the firm's OMS/EMS). Industry Members are also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Multi-leg Order Cancelled event, or in a separate Multi-leg Order Cancel Request event. In this example, the *eventTimestamp* reflects the same time that the time that acknowledgement was received from the exchange. In this example, the request time is captured in a separate Multi-Leg Order Cancel Request event.

#	Step	Reported Event	Comments
1	Customer electronically sends a complex option order to Broker 1	*NA*	
2	Broker 1 (BRK1) accepts the complex option order	*Broker 1 reports a **Multi-Leg New Order event*** type: MLNO	

#	Step	Reported Event	Comments
		orderKeyDate: 20210222T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210222T153010.34567 manualFlag: false deptType: T price: -15.25 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: firmDesignatedID: FRM345 accountHolderType: A affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00030500 openCloseIndicator: Close side: S legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: SS legRatioQuantity: 100	
3	Broker 1 routes complex order to the exchange for execution	*Broker 1 reports a **Multi-Leg Order Route event*** type: MLOR orderKeyDate: 20210222T000000 orderID: CO12345	

#	Step	Reported Event	Comments
		underlying: XYZ eventTimestamp: 20210222T153036.323456 manualFlag: false senderIMID: 123:BRK1 destination: EXCH1 destinationType: E routedOrderID: RT343434 session: SS1234 price: -15.25 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00030500 openCloseIndicator: Close side: S legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: SS legRatioQuantity: 100	
4	Exchange 1 accepts the Complex Option order	*Exchange 1 reports a **Participant Complex Option Order Accepted event***	
5	Customer sends the cancel instruction to Broker 1	*NA*	
6	Broker 1 receives a cancel request from the customer for the	*Broker 1 reports a **Multi-Leg Order Cancel Request event***	

#	Step	Reported Event	Comments
	previously routed order	type: MLOCR orderKeyDate: 20210222T000000 orderID: COR12345 underlying: XYZ eventTimestamp: 20210222T154422.12345 manualFlag: false cancelQty: 100	
7	Broker 1 cancels the route to the exchange	*Broker 1 reports a **Multi-Leg Order Cancelled Route event*** type: MLCR orderKeyDate: 20210222T000000 orderID: CR12345 underlying: XYZ eventTimestamp: 20210222T155634.34567 manualFlag: false cancelQty: 100 senderIMID: 123:BRK1 destination: EXCH1 destinationType: E routedOrderID: RT343434 session: SS1234	
8	The exchange cancels the Complex Option order	*Exchange reports a Participant **Option Order Cancelled event***	

#	Step	Reported Event	Comments
9	Broker 1 cancels the complex customer order	*Broker 1 reports a **Multi-Leg Order Cancelled event*** type: MLOC orderKeyDate: 20210222T000000 orderID: CCO12345 underlying: XYZ eventTimestamp: 20210222T155634.34567 manualFlag: false cancelQty: 100 leaveslQty: 0 initiator: C requestTimestamp:	In this example, the *eventTimestamp* represents the time that acknowledgement was received from the exchange. Since a Multi-Leg Order Cancel Request event was reported, the *requestTimestamp* field in the related Multi-Leg Order Cancelled event must be blank.

3.6.9. Industry Member Cancels a Complex Option Order Previously Routed as Individual Single Order Legs

This scenario illustrates the CAT reporting requirements when an Industry Member cancels a complex order that was previously routed to an exchange as individual single order legs to external execution venues.

In this scenario, an Industry Member receives a complex order from a customer electronically. The Industry Member routes the options leg to an options exchange for execution and routes the equity leg to Equity Broker 2 for execution. The Industry Member receives a subsequent cancel request from the customer to cancel the complex order. The Industry Member cancels the options route that was sent to the options exchange, cancels the equity route that was sent to Equity Broker 2, and confirms the cancellation of the complex order.
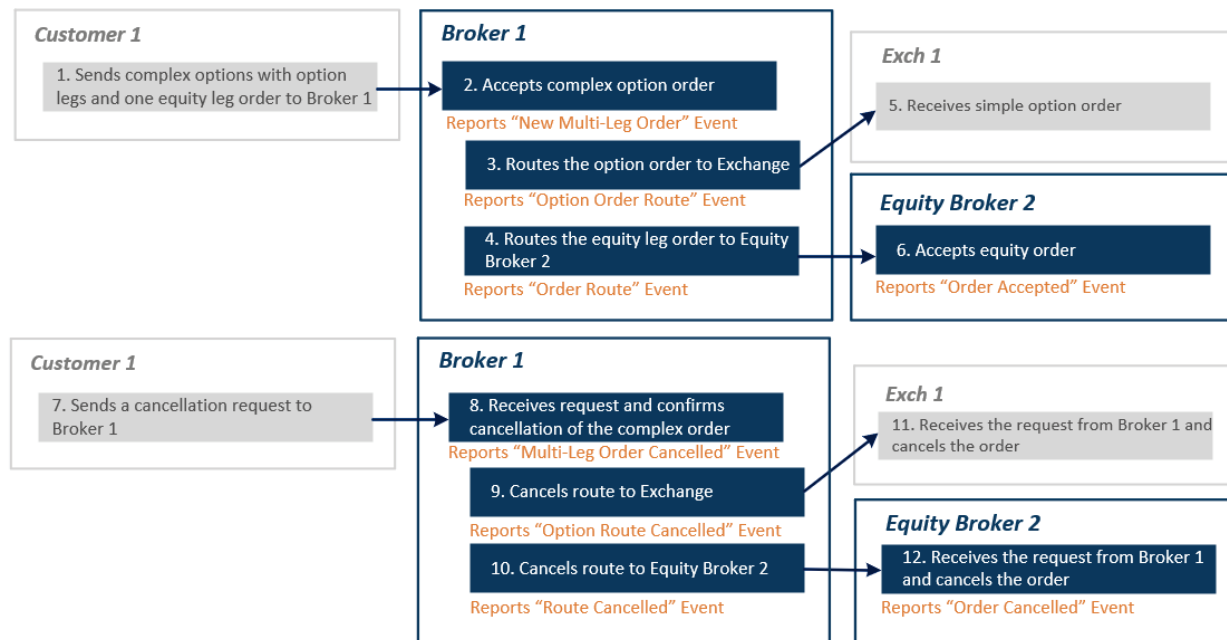
Industry Member Broker 1 is required to report:

- The receipt of the complex option order from the customer (Multi-Leg New Order event)
- The route of the single leg option order to the exchange (Option Order Route event)
- The route of the equity leg order to Equity Broker 2 (Order Route event).
- The receipt of the complex option cancellation request (*requestTimestamp* in Multi-Leg Order Cancelled event)
- The confirmation of the cancellation of the complex option order (*eventTimestamp* in Multi-Leg Order Cancelled event)
- The cancellation of the route of the option leg to the exchange (Option Route Cancelled event)
- The cancellation of the route of the equity leg to Equity Broker 2 (Route Cancelled event)

Industry Member Equity Broker 2 is required to report:

- The receipt of the equity order from Broker 1 (Order Accepted event)
- The receipt of the cancellation request from Broker 1 (*requestTimestamp* in Order Cancelled event)
- The confirmation of the cancellation of order from Broker 1 (*eventTimestamp* in Order Cancelled event)

Industry Members are required to capture the *eventTimestamp* in Order Cancelled events reflecting the time the order was cancelled (e.g., the time that the order was confirmed to be cancelled in the firm's OMS/EMS). Industry Members are also required to capture the time that the request was received from the customer in the *requestTimestamp* field in the Order Cancelled event, or in a separate Order Cancel Request event. In this example, the *eventTimestamp* reflects the same time that the time that the request

was received. In this example, the request time is captured in the *requestTimestamp* field in the Order Cancelled events.

#	Step	Reported Event	Comments
1	Customer electronically sends a complex option order to Broker 1	*NA*	
2	Broker 1 (BRK1) accepts the complex option order	*Broker 1 reports a **Multi-Leg New Order event*** type: MLNO orderKeyDate: 20210222T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210222T153010.34567 manualFlag: false deptType: T price: 32.75 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: firmDesignatedID: FRM345 accountHolderType: P affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: S legRatioQuantity: 1 legRefID: 2 symbol: XYZ side: B legRatioQuantity: 75	
3	Broker 1 routes the option leg to Exchange 1	*Broker 1 reports an **Option Order Route event***	The *multiLegInd* must be populated as 'true' to indicate that the immediately preceding event in the order life cycle is

#	Step	Reported Event	Comments
		type: MOOR orderKeyDate: 20210222T000000 orderID: CO12345 optionID: XYZ 210810C00032000 eventTimestamp: 20210222T095603.768455 senderIMID: 123:BKR1 destination: EXCH1 destinationType: E routedOrderID: RTOPTLA1 session: s.012.5 side: S price: 1.25 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: exchOriginCode: P affiliateFlag: false openCloseIndicator: Open multiLegInd: true	a Multi-Leg order event.
4	Broker 1 routes the Equity Leg to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20210222T000000 orderID: CO12345 symbol: XYZ eventTimestamp: 20210222T095641.845584 senderIMID: 123:BKR1 destination: 456:EBK2 destinationType: F routedOrderID: RTEQLB1 side: B price: 33 quantity: 7500 orderType: LMT timeInForce: DAY=20210222 handlingInstructions: OPT tradingSession: REG exchOriginCode: P affiliateFlag: false handlingInstructions: OPT	The *multiLegInd* must be populated as 'true' to indicate that the immediately preceding event in the order life cycle is a Multi-Leg order event. Broker 1 must populate a *handlingInstructions* value of 'OPT' to indicate that this is an options related transaction.

#	Step	Reported Event	Comments
		multiLegInd: true	
5	Exchange 1 accepts the option leg order from Broker 1	*Exchange 1 reports a **Participant Simple Option Order Accepted event***	
6	Equity Broker 2 accepts the equity leg order from Broker 1	*Equity Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20210222T000000 orderID: EO112233 symbol: XYZ eventTimestamp: 20210222T095641.984213 manualFlag: false receiverIMID: 456:EBK2 senderIMID: 123:BKR1 senderType: F routedOrderID: RTEQLB1 affiliateFlag: false deptType: T side: B price: 33 quantity: 7500 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG isoInd: NA	
7	Broker 1 receives a cancellation request from the customer for the previously routed order and cancels the order	*Broker 1 reports a **Multi-Leg Order Cancelled event*** type: MLOC orderKeyDate: 20210222T000000 orderID: CCO12345 underlying: XYZ eventTimestamp: 20210222T155634.34567 manualFlag: false cancelQty: 100 leavesIQty: 0 initiator: C requestTimestamp: 20210222T155634.34567	In this example, the *eventTimestamp* represents the same time that the request was received from the customer. Since the *requestTimestamp* field is populated, Broker 1 must not report a separate Multi-Leg Order Cancel Request event.
8	Broker 1 cancels the	*Broker 1 reports an **Option Route***	

#	Step	Reported Event	Comments
	option route to the exchange	**Cancelled event** type: MOCR orderKeyDate: 20210222T000000 orderID: CO12345 optionID: XYZ 210810C00032000 eventTimestamp: 20210222T102041.123456 manualFlag: false cancelQty: 100 senderIMID: 123:BKR1 destination: EXCH1 destinationType: E routedOrderID: RTOPTLA1 session: s.012.5	
9	Broker 1 cancels the route to Equity Broker 2	*Broker 1 reports a **Route Cancelled Event*** type: MECR orderKeyDate: 20210222T000000 orderID: O56575 symbol: XYZ eventTimestamp: 20210222T102041.123456 manualFlag: false cancelQty: 7500 senderIMID: 123:BKR1 destination: 456:EBK2 destinationType: F routedOrderID: RTEQLB1	
10	The exchange cancels the simple option order	*Exchange reports a Participant **Option Order Cancelled event***	
11	Broker 2 receives the request from Broker 1 and cancels the order	*Broker 1 reports an **Order Cancelled event*** type: MEOC orderKeyDate: 20210222T000000 orderID: COR56575 symbol: XYZ eventTimestamp: 20210222T102041.623456 manualFlag: false cancelQty: 7500 leavesQty: 0	In this example, the *eventTimestamp* represents the same time that the request was received from the customer.

#	Step	Reported Event	Comments
		initiator: C requestTimestamp: 20210222T102041.623456	

3.7. RFQ and Solicitation Response Scenarios

This section illustrates the CAT reporting requirements for responses to RFQs (Request for Quote) and other forms of solicitation. Refer to <u>Section 2.16</u> for additional RFQ and Solicitation Response scenarios that apply to both Equity and Options order flow.

3.7.1. Retired Scenario

3.7.2. Retired Scenario

3.7.3. Response to RFQ is Sent Through an RFQ Platform operated by a Broker-Dealer

This scenario illustrates the CAT reporting requirements when an Industry Member (Solicitor) receives a customer order and sends the customer order to an Industry Member broker-dealer that operates an RFQ platform (BD RFQ Platform) with instructions to issue an RFQ to solicit the contra side. The broker-dealer operating the RFQ platforms sends out the RFQ and multiple Industry Members (Responders) respond to the RFQ directly through the RFQ platform. The broker-dealer operating the RFQ platform selects the winning response and routes the customer order and the selected response as a paired order to an exchange for execution.
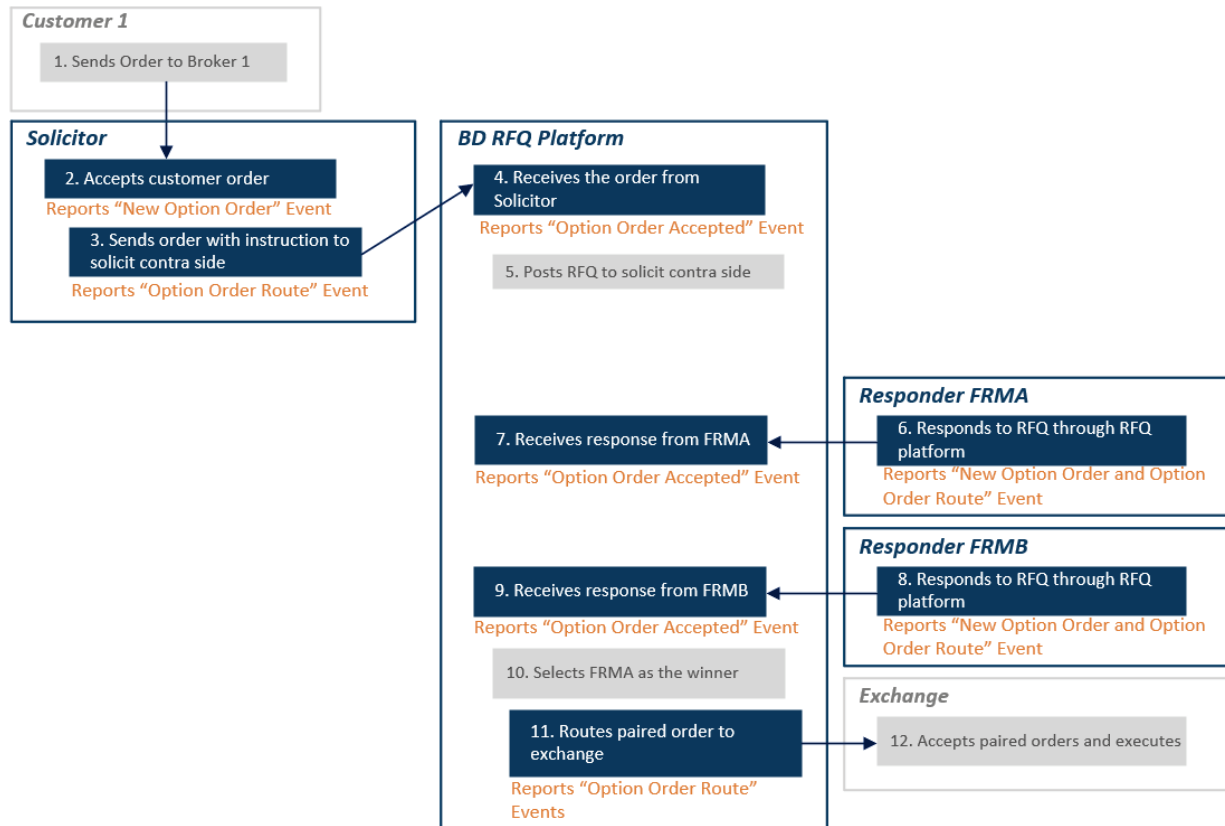
The Solicitor is required to report the following:

- The receipt of a customer order (New Option Order event)
- The route of the customer order to the BD RFQ Platform (Option Order Route event)

Each Responder is required to report the following:

- The origination of a proprietary order (New Option Order event *solicitationFlag* as 'true' and the *RFQID* populated)
- The route of the order to the BD RFQ Platform (Option Order Route event)

The BD RFQ Platform is required to report the following:

- The receipt of the customer order from the Solicitor (Option Order Accepted event)
- The receipt of responses from each Responder, including those that were not selected (Option Order Accepted event with *solicitationFlag* as 'true')
- The route of the customer order from the Solicitor and the order from the winning Responder as a paired to the exchange (Order Route events with the same *pairedOrderID* populated)

All orders received or originated after the selection of a winning bid to facilitate the execution of such bid as the result of such RFQ or solicitation process must be reported and must be identified as being part of an RFQ or solicitation process subject to the phasing requirements as set forth in the CAT Reporting Technical Specifications for Industry Members as outlined in FAQ B45.

#	Step	Reported Event	Comments
1	The Solicitor FRMS receives a customer order	*Solicitor FRMS reports a **New Option Order event*** type: MONO orderKeyDate: 20180417T000000 orderID: C56743 optionID: XYZ 210810C00030500 eventTimestamp: 20180417T153033.234456 manualFlag: false deptType: T side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	The Solicitor FRMS routes the customer order to the BD RFQ platform RFQP, issues an RFQ.	*Solicitor FRMS reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180417T000000 orderID: C56743 optionID: XYZ 210810C00030500 eventTimestamp: 20180417T153033.234456 manualFlag: false senderIMID: 123:FRMS destination: 987:RFQP destinationType: F routedOrderID: AO226 side: B price: 10.00 quantity: 1000 orderType: LMT	

#	Step	Reported Event	Comments
		timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
3	The BD RFQ Platform RFQP receives the order from FRMS	*BD RFQ Platform RFQP reports an* **Option Order Accepted event** type: MOOA orderKeyDate: 20180417T000000 orderID: O8654 optionID: XYZ 210810C00030500 eventTimestamp: 20180417T153033.534456 manualFlag: false receiverIMID: 987:RFQP senderIMID: 123:FRMS senderType: F routedOrderID: AO226 affiliateFlag: false deptType: ATS side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: custDspIntrFlag: false	
4	FRMA responds to the RFQ	*Responder FRMA reports a* **New Option Order event** type: MONO orderKeyDate: 20180417T000000 orderID: A6789 optionID: XYZ 210810C00030500 eventTimestamp: 20180417T153035.234456 manualFlag: true deptType: T solicitationFlag: true RFQID: 12345 side: SL price: 10.00 quantity: 1000 orderType: LMT	The *solicitationFlag* must be populated as 'true' and the *RFQID* field must be populated.

#	Step	Reported Event	Comments
		timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: custDspIntrFlag: false firmDesignatedID: FRMA1234 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
5	FRMA routes order to BD RFQ Platform RFQP	*Responder FRMA reports an* **Option Order Route event** type: MOOR orderKeyDate: 20180417T000000 orderID: A6789 optionID: XYZ 210810C00030500 eventTimestamp: 20180417T153035.234456 manualFlag: false senderIMID: 456:FRMA destination: 987:RFQP destinationType: F routedOrderID: AO227 side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
6	BD RFQ Platform RFQP receives the order from FRMA	*RFQ Platform RFQP reports an* **Option Order Accepted event** type: MOOA orderKeyDate: 20180417T000000 orderID: O8655 optionID: XYZ 210810C00030500 eventTimestamp: 20180417T153035.534456 manualFlag: false receiverIMID: 987:RFQP senderIMID: 456:FRMA senderType: F routedOrderID: AO227	The *solicitationFlag* must be populated as 'true'.

#	Step	Reported Event	Comments
		affiliateFlag: false deptType: ATS side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false solicitationFlag: true	
7	FRMB responds to the RFQ	*Responder FRMB reports a **New Option Order event*** type: MONO orderKeyDate: 20180417T000000 orderID: B6789 optionID: XYZ 210810C00030500 eventTimestamp: 20180417T153036.234456 manualFlag: true deptType: T solicitationFlag: true RFQID: 12345 side: SL price: 10.02 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: custDspIntrFlag: false firmDesignatedID: FRMB1234 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	The *solicitationFlag* must be populated as 'true' and the *RFQID* field must be populated.
8	FRMB routes order to RFQ Platform RFQP	*Responder FRMB reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180417T000000 orderID: B6789 optionID: XYZ 210810C00030500 eventTimestamp: 20180417T153036.234456	

#	Step	Reported Event	Comments
		manualFlag: false senderIMID: 678:FRMB destination: 987:RFQP destinationType: F routedOrderID: AO228 side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions:	
9	BD RFQ Platform RFQP receives the order from FRMB	*RFQ Platform RFQP reports an* **Option Order Accepted event** type: MOOA orderKeyDate: 20180417T000000 orderID: O8656 optionID: XYZ 210810C00030500 eventTimestamp: 20180417T153036.534456 manualFlag: false receiverIMID: 987:RFQP senderIMID: 678:FRMB senderType: F routedOrderID: AO227 affiliateFlag: false deptType: ATS side: SL price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false solicitationFlag: true	The *solicitationFlag* must be populated as 'true'.
10	The RFQ Platform selects FRMA as the winner and routes a paired order to the Exchange	*RFQ Platform RFQP reports an* **Option Order Route event (1/2)** type: MOOR orderKeyDate: 20180417T000000 orderID: O8655 optionID: XYZ 210810C00030500	Both Option Order Route events must be populated with the same *pairedOrderID*

#	Step	Reported Event	Comments
		eventTimestamp: 20180417T153037.234456 manualFlag: false senderIMID: 987:RFQP destination: EXCH1 destinationType: E routedOrderID: AO230 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: pairedOrderID: PAIR123 *RFQ Platform RFQP reports an* **Option Order Route event (2/2)** type: MOOR orderKeyDate: 20180417T000000 orderID: O8656 optionID: XYZ 210810C00030500 eventTimestamp: 20180417T153037.234456 manualFlag: false senderIMID: 987:RFQP destination: EXCH1 destinationType: E routedOrderID: AO231 side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: pairedOrderID: PAIR123	

3.7.4. Industry Member Receives a Customer Order and Solicits the Contra Side, then Routes the Orders as a pair to an Exchange for Execution

This scenario illustrates the CAT reporting requirements when an Industry Member electronically receives a simple option from a customer for 10 contracts and manually solicits Industry Member Broker 2 to pair the order. Broker 2 responds verbally to the solicitation and agrees to take the other side of the order. The Solicitor accepts Broker 2's response and Broker 2 verbally originates and routes an order to the Solicitor.
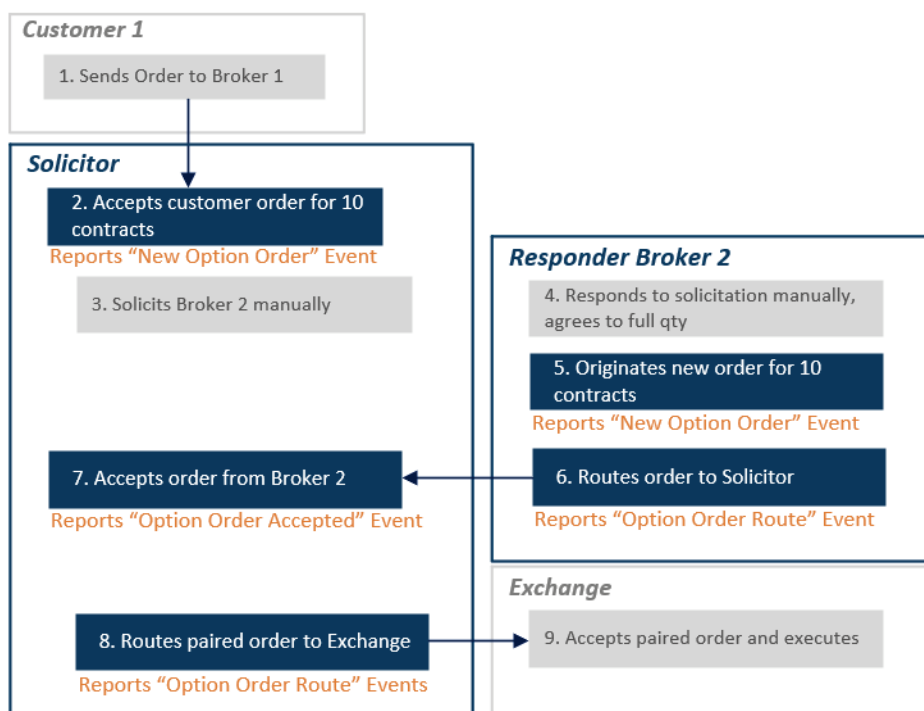
Customer 1
1. Sends Order to Broker 1

Solicitor
2. Accepts customer order for 10 contracts
Reports "New Option Order" Event

3. Solicits Broker 2 manually

Responder Broker 2
4. Responds to solicitation manually, agrees to full qty

5. Originates new order for 10 contracts
Reports "New Option Order" Event

7. Accepts order from Broker 2
Reports "Option Order Accepted" Event

6. Routes order to Solicitor
Reports "Option Order Route" Event

Exchange
9. Accepts paired order and executes

8. Routes paired order to Exchange
Reports "Option Order Route" Events

Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Option Order event)
- The receipt of the order from Broker 2 (Option Order Accepted event)
- The route of the paired order to the exchange (Option Order Route events with the same *pairedOrderID*)

Industry Member Broker 2 is required to report:

- The origination of a New Order for the selected response (New Order event)
- The route of the order to the Broker 2 (Order Route event)

Industry Members are not required to report RFQs or other forms of solicitation to CAT. Responses to RFQs or other forms of solicitation that are communicated manually (e.g. Phone, Instant Message) are not required to be reported to CAT in Phase 2d. However, this activity is expected to become required in 2023. While Broker 2 is not required to report its response to solicitation from Broker 1 to CAT, Broker 2

must report the origination and route of the order to Broker 1 once selected. The *solicitationFlag* must not be populated as 'true' on events originated after selection of the winning bid.

#	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: 20210528T000000 orderID: O54321 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T101327.5543 deptType: A side: B price: 7.50 quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG handlingInstructions: firmDesignatedID: CUS98765 accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	
3	Broker 1 calls Broker 2 to solicit contra side, Broker 2 verbally agrees to trade the contra side	*N/A*	RFQs or other forms of solicitation are not required to be reported to CAT. Responses to RFQs or other forms of solicitation that are communicated manually (e.g. Phone, Instant Message) are not required to be reported to CAT in Phase 2d. However, this activity is expected to become required in 2023.
4	Broker 2 verbally originates and routes an order to Broker 1	*Broker 2 reports a **New Option Order event and an Option Order Route** event* type: MONO orderKeyDate: 20210528T000000 orderID: B2-123123 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T101506 manualFlag: true	The *solicitationFlag* must not be populated as 'true' on events originated after selection of the winning bid. The *manualFlag* must be marked true on both the MONO and MOOR events. The *routedOrderID* field is not required for manual routes.

#	Step	Reported Event	Comments
		electronicTimestamp: deptType: T side: S price: 7.50 quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG handlingInstructions: firmDesignatedID: FRM740463 accountHolderType: P affiliateFlag: false solicitationFlag: false openCloseIndicator: Open representativeInd: N type: MOOR orderKeyDate: 20210528T000000 orderID: B2-123123 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T101506 manualFlag: true electronicTimestamp: senderIMID: 456:BRK2 destination: 123:BRKR01 destinationType: F routedOrderID: side: S price: 7.50 quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG handlingInstructions: affiliateFlag: false openCloseIndicator: Open	
5	Broker 1 accepts verbal order from Broker 2	*Broker 1 reports an **Option Order Accepted event*** type: MOOA orderKeyDate: 20210528T000000 orderID: O54325 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T101506 manualFlag: true electronicTimestamp: 20210528T101522.5648	The *manualFlag* must be populated as 'true' on the MONO event. The *routedOrderID* is not required on orders received manually.

#	Step	Reported Event	Comments
		receiverIMID: 123:BRKR01 senderIMID: 456:BRK2 senderType: F routedOrderID: affiliateFlag: false deptType: A side: S price: 7.50 quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG affiliateFlag: false solicitationFlag: false openCloseIndicator: Open	
6	Broker 1 executes trade by sending paired orders to BOX Matching Engine	*Broker 1 reports an **Option Order Route event** for each of the paired orders* type: MOOR orderKeyDate: 20210528T000000 orderID: O54321 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T133033.4684 senderIMID: 123:BRKR01 destination: Exch1 destinationType: E routedOrderID: RT4210 session: EFGH4567 side: B price: 7.50 quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open pairedOrderID: FBX123 type: MOOR orderKeyDate: 20210528T000000 orderID: O54325 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T133033.4684 senderIMID: 123:BRKR01	.

#	Step	Reported Event	Comments
		destination: Exch1 destinationType: E routedOrderID: RT4210 session: EFGH4567 side: S price: 7.50 quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG exchOriginCode: F affiliateFlag: false openCloseIndicator: Open pairedOrderID: FBX123	
7	BOX Options exchange accepts the paired option orders from Broker 1 into the exchange matching engine for crossing.	*Exchange reports a Participant **Order Accept event** for each order in the pair.*	
8	BOX Options exchange matching engine executes the full quantity of the paired option orders	*Exchange reports a Participant **Simple Option Trade events on each order***	

3.7.5. 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 simple option from a customer for 100 contracts and manually solicits Industry Member Broker 2 to pair the order. Broker 2 responds manually to the solicitation and agrees to take the other side for only 60 contracts. The Solicitor accepts Broker 2's response, and Broker 2 then originates and routes an order to the Solicitor. Broker 1 is then left with 40 contracts of the customer order, which is routed to the exchange as a simple option order.
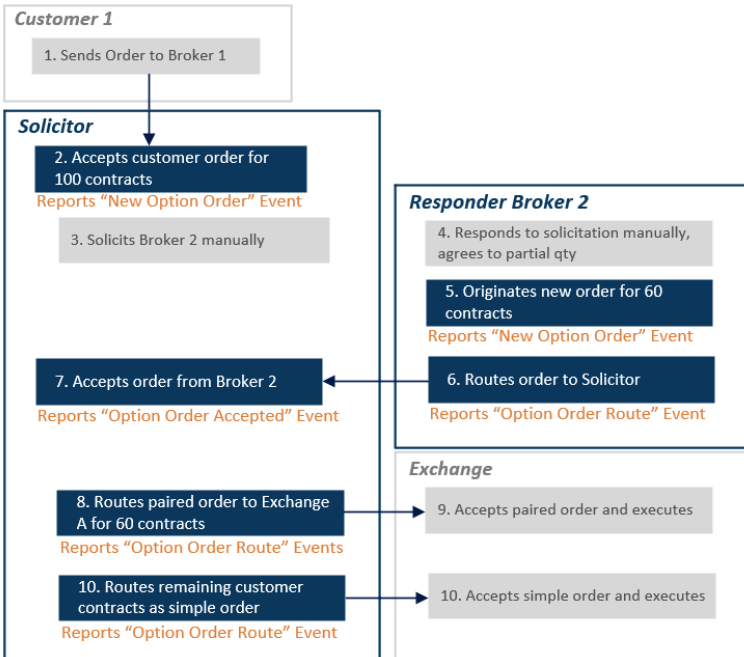
Industry Member Broker 1 (Solicitor) is required to report:

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

- The receipt of the order from Broker 2 (Option Order Accepted event)

- The route of the paired order to the exchange (Option Order Route events with the same *pairedOrderID*)

- The route of the un-paired quantity of the single leg order to an exchange (Option Order Route event)

Industry Member Broker 2 (Responder) is required to report:

- The origination of a New Order for the selected response (New Order event)

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

Responses to RFQs or other forms of solicitation that are communicated manually (e.g. Phone, Instant Message) are not required to be reported to CAT in Phase 2d. However, this activity may be required in future phases of CAT.

The *solicitationFlag* is not required to be populated as 'true' on events originated after selection of the winning bid. Refer to CAT FAQ B45 for additional information.

#	Step	Reported Event	Comments
1	Customer electronically sends option order to	*NA*	

#	Step	Reported Event	Comments
	Broker 1		
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 solicitationFlag: false representativeInd: N	
3	Broker 1 manually solicits Broker 2 to take other side of order.	*NA*	RFQs and other forms of solicitation are not required to be reported to CAT.
4	Broker 2 manually responds positively to the solicitation, and is selected as the winner by the Solicitor.	*NA*	Responses to RFQs or other forms of solicitation that are communicated manually (e.g. Phone, Instant Message) are not required to be reported to CAT in Phase 2d. However, this activity may be required in future phases of CAT.
5	Broker 2 originates an order for 60 contracts	*Broker 2 reports a* **New Option Order event** type: MONO orderKeyDate: 20180516T000000 orderID: O12345 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133033.1234 deptType: A side: S price: 8.5 quantity: 60 orderType: LMT timeInForce: DAY=20180516	The *solicitationFlag* is not required to be populated as 'true' on events originated after selection of the winning bid.

#	Step	Reported Event	Comments
		tradingSession: REG firmDesignatedID: PROP987 accountHolderType: P affiliateFlag: false solicitationFlag: false representativeInd: N	
6	Broker 2 routes the order to Broker 1 for 60 contracts	*Broker 2 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: O12345 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133033.1234 senderIMID: 123:BROKER2 destination: 345:BROKER1 destinationType: F routedOrderID: RT7170 side: S price: 8.5 quantity: 60 orderType: LMT timeInForce: DAY=20180516 tradingSession: REG affiliateFlag: false	
7	Broker 1 receives the order from Broker 2 for 60 contracts	*Broker 1 reports an **Option Order Accepted event*** type: MOOA orderKeyDate: 20180417T000000 orderID: O8654 optionID: XYZ 210810C00030500 eventTimestamp: 20180516T133033.1234 manualFlag: false receiverIMID: 345:BROKER1 senderIMID: 123:BROKER2 senderType: F routedOrderID: RT7170 affiliateFlag: false solicitationFlag: false deptType: A side: S price: 8.5 quantity: 60	

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: custDspIntrFlag: false	
8	Broker 1 routes a paired order to the exchange	*Broker 1 reports an **Option Order Route event (1/2)*** type: MOOR orderKeyDate: 20180417T000000 orderID: OA76543 optionID: XYZ 210810C00030500 eventTimestamp: 20180516T133033.8234 manualFlag: false senderIMID: 345:BROKER1 destination: EXCH1 destinationType: E routedOrderID: AO230 side: B price: 8.5 quantity: 60 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG exchOriginCode: C affiliateFlag: false isoInd: NA handlingInstructions: pairedOrderID: PAIR123 *Broker 1 reports an **Option Order Route event (2/2)*** type: MOOR orderKeyDate: 20180417T000000 orderID: O8654 optionID: XYZ 210810C00030500 eventTimestamp: 20180516T133033.8234 manualFlag: false senderIMID: 345:BROKER1 destination: EXCH1 destinationType: E routedOrderID: AO231 side: S	Both Option Order Route events must contain the same *pairedOrderID*

#	Step	Reported Event	Comments
		price: 8.5 quantity: 60 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG exchOriginCode: C affiliateFlag: false isoInd: NA handlingInstructions: pairedOrderID: PAIR123	
9	Exchange 1 accepts the paired option order from Broker 1	*Exchange 1 reports two Participant **Simple Option Order Accepted** events*	
10	Broker 1 routes a simple option order to the exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: OA76543 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133035.8234 senderIMID: 123: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	
11	Exchange 2 accepts the order from Broker 1	*Exchange 2 reports a Participant **Single Option Order Accepted** event*	

3.7.6. Floor Broker Solicits the Contra Side of a Multi-Leg Order and Routes the Equity Leg Orders to the Responder for Execution

This scenario illustrates the CAT reporting requirements when a non-FINRA Member Floor Broker receives a multi-leg order from non-FINRA Member Broker 1, and solicits FINRA Member Broker 3 over

the phone to take the other side. Broker 3 responds positively to the solicitation over the phone and routes an order to the floor broker. Since Broker 3 is the only FINRA Member firm involved in the transaction, the floor broker prices the equity legs and routes the equity legs to Broker 3 for crossing. The option legs are routed to an options exchange for execution.
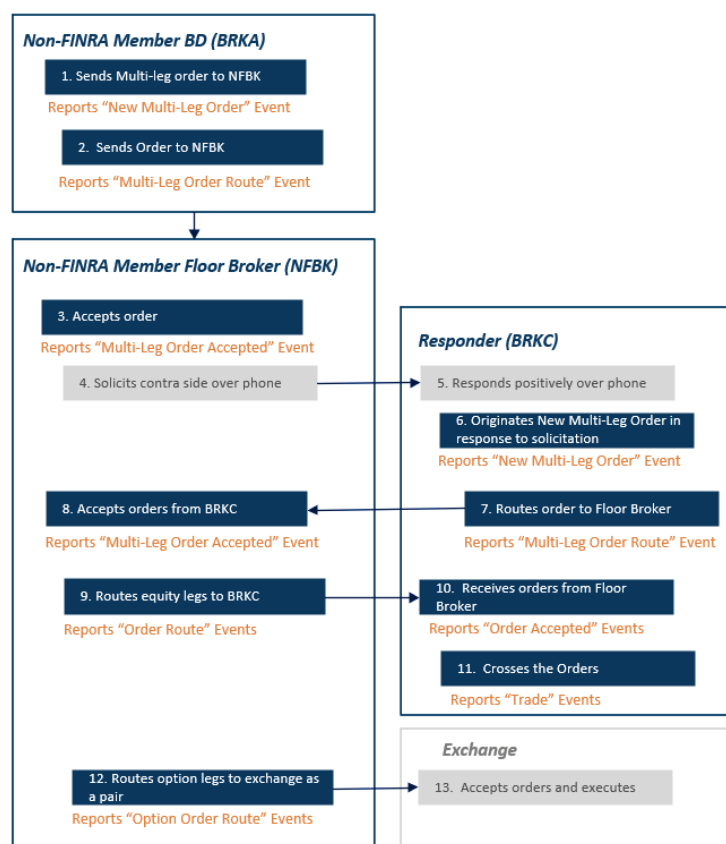
Non-FINRA Member Broker 1 is required to report:

- The origination of the multi-leg order (New Multi-Leg Order event)
- The route of the multi-leg order to the floor broker (Multi-Leg Order Route event)

The non-FINRA Member Floor Broker is required to report:
- The receipt of the multi-leg order (Sell) from Broker 1 (Multi-Leg Order Accepted event)
- The receipt of the multi-leg order (Buy) from Broker 3 (Multi-Leg Order Accepted event)
- The route of the equity legs to Broker 3 for execution (Order Route events)
- The route of the option legs to an exchange for execution (Option Order Route events)

FINRA Member Broker 3 is required to report
- For the order originated as a result of solicitation:

- o The origination of the multi-leg order a result of solicitation (New Multi-Leg Order event)
- o The route of the multi-leg order to the floor broker (Multi-Leg Order Route event)
- For the equity legs received from the floor broker:
  - o The receipt of both equity legs from the floor broker (Order Accepted events)
  - o The execution of the equity legs (Trade event)

Both parties are required to report the route/receipt of the multi-leg order from Broker 3 to the floor broker, and the route/receipt of the equity legs from the floor broker to Broker 3 for execution.

Industry Members are not required to report RFQs or other forms of solicitation to CAT. Responses to RFQs or other forms of solicitation that are communicated manually (e.g. Phone, Instant Message) are not required to be reported to CAT in Phase 2d. However, this activity is expected to become required in 2023. The *solicitationFlag* is not required to be populated as 'true' on events originated after selection of the winning bid.

#	Step	Reported Event	Comments
1	Non-FINRA Member Broker 1 originates a multi-leg order	*Broker 1 reports a **New Multi-Leg Order event*** type: MLNO orderKeyDate: 20180417T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20180417T153035.123456 manualFlag: false deptType: T price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: firmDesignatedID: FRM345 accountHolderType: P affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 symbol: XYZ side: B legRatioQuantity: 100	

#	Step	Reported Event	Comments
		legRefID: 2 optionID: XYZ 180810C00001925 side: S legRatioQuantity: 1	
2	Broker 1 (BRKA) routes the multi-leg order to the non-FINRA Member Floor Broker (NFBK)	*Broker 1 reports a **Multi-Leg Order Route event*** type: MLOR orderKeyDate: 20180417T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20180417T153035.323456 manualFlag: false senderIMID: 123:BRKA destination: 456:NFBK destinationType: F routedOrderID: 55555 price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 symbol: XYZ side: B legRatioQuantity: 100 legRefID: 2 optionID: XYZ 180810C00001925 side: S legRatioQuantity: 1	
3	Non-FINRA Member Floor Broker (NFBK) accepts the multi-leg order from Broker 1 (BRKA)	*Non-FINRA Member Floor Broker reports a **Multi-Leg Order Accepted event*** type: MLOA orderKeyDate: 20180417T000000 orderID: RTB910	

#	Step	Reported Event	Comments
		underlying: XYZ eventTimestamp: 20180417T153035.323456 manualFlag: false receiverIMID: 456:NFBK senderIMID: 123:BRKA senderType: F routedOrderID: 55555 price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 symbol: XYZ side: B legRatioQuantity: 100 legRefID: 2 optionID: XYZ 180810C00001925 side: S legRatioQuantity: 1	
4	Floor Broker solicits FINRA Member Broker 3 over the phone to take the other side	*N/A*	Industry Members are not required to report RFQs or other forms of solicitation to CAT.
5	Broker 3 responds positively to solicitation	*N/A*	Responses to RFQs or other forms of solicitation that are communicated manually not required to be reported to CAT in Phase 2d.
6	Broker 3 originates a multi-leg order as a result of solicitation and reports the equity leg	*Broker 3 reports a **New Multi-Leg Order event*** type: MLNO orderKeyDate: 20180417T000000 orderID: CO34567 underlying: XYZ eventTimestamp: 20180417T153037.423456 manualFlag: false deptType: T	The *solicitationFlag* is not required to be populated as 'true' on events originated after selection of the winning bid.

#	Step	Reported Event	Comments
		price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: firmDesignatedID: FRM678 accountHolderType: P affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 symbol: XYZ side: SL legRatioQuantity: 100 legRefID: 2 optionID: XYZ 180810C00001925 side: B legRatioQuantity: 1	
7	Broker 3 (BRKC) routes the multi-leg order to the non-FINRA Member Floor Broker (NFBK)	*Broker 3 reports a **Multi-Leg Order Route event*** type: MLOR orderKeyDate: 20180417T000000 orderID: CO34567 underlying: XYZ eventTimestamp: 20180417T153037.423456 manualFlag: false senderIMID: 987:BRKC destination: 456:NFBK destinationType: F routedOrderID: 77777 price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 2	

#	Step	Reported Event	Comments
		priceType: PU legDetails: legRefID: 1 symbol: XYZ side: SL legRatioQuantity: 100 legRefID: 2 optionID: XYZ 180810C00001925 side: B legRatioQuantity: 1	
8	Non-FINRA Member Floor Broker (NFBK) accepts the multi-leg order from Broker 3 (BRKC)	*Non-FINRA Member Floor Broker reports a **Multi-Leg Order Accepted event*** type: MLOA orderKeyDate: 20180417T000000 orderID: RTB920 underlying: XYZ eventTimestamp: 20180417T153037.423456 manualFlag: false receiverIMID: 456:NFBK senderIMID: 987:BRKA senderType: F routedOrderID: 77777 price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: affiliateFlag: false solicitationFlag: false numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 symbol: XYZ side: SL legRatioQuantity: 100 legRefID: 2 optionID: XYZ 180810C00001925 side: B	The *solicitationFlag* is not required to be populated as 'true' on events originated after selection of the winning bid.

#	Step	Reported Event	Comments
		legRatioQuantity: 1	
9	Floor Broker (NFBK) prices the individual legs and routes the equity legs to Broker 3 (BRKC) for crossing	*Non-FINRA Member Floor Broker reports an* **Order Route event (1/2)** type: MEOR orderKeyDate: 20180417T000000 orderID: RTB910 symbol: XYZ eventTimestamp: 20180417T153041.553456 manualFlag: false senderIMID: 456:NFBK destination: 987:BRKC destinationType: F routedOrderID: EQO123 side: B price: 10.00 quantity: 100 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: OPT multiLegInd: true *Non-FINRA Member Floor Broker reports an* **Order Route event (2/2)** type: MEOR orderKeyDate: 20180417T000000 orderID: RTB920 symbol: XYZ eventTimestamp: 20180417T153041.553456 manualFlag: false senderIMID: 456:NFBK destination: 987:BRKC destinationType: F routedOrderID: EQO456 side: SL price: 10.00 quantity: 100 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false	Floor Broker must report a *handlingInstructions* value of 'OPT' in its order Route events. The *multiLegInd* must be populated as 'true' to indicate that the immediately preceding event in the order life cycle is a Multi-Leg order event.

#	Step	Reported Event	Comments
		isoInd: NA handlingInstructions: OPT multiLegInd: true	
10	Broker 3 (BRKC) receives both orders from Floor Broker (NFBK)	*Broker 3 reports an **Order Accepted event (1/2)*** type: MEOA orderKeyDate: 20180417T000000 orderID: CMPR123 symbol: XYZ eventTimestamp: 20180417T153041.553456 manualFlag: false receiverIMID: 987:BRKC senderIMID: 456:NFBK senderType: F routedOrderID: EQO123 affiliateFlag: false deptType: T side: B price: 10.00 quantity: 100 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false *Broker 3 reports an **Order Accepted event (2/2)*** type: MEOA orderKeyDate: 20180417T000000 orderID: CMPR987 symbol: XYZ eventTimestamp: 20180417T153041.553456 manualFlag: false receiverIMID: 987:BRKC senderIMID: 456:NFBK senderType: F routedOrderID: EQO456 affiliateFlag: false deptType: T side: SL price: 10.00	Broker 3 must report the *handlingInstructions* value of 'OPT' that was received from Floor Broker.

#	Step	Reported Event	Comments
		quantity: 100 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	
11	Broker 3 crosses the Buy and Sell orders	*Broker 3 reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ123 symbol: XYZ eventTimestamp: 20180417T153045.553456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 100 price: 10.00 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: CMPR123 side: B sellDetails: orderKeyDate: 20180417T000000 orderID: CMPR987 side: SL	
12	Floor Broker (NFBK) prices the individual legs and routes the options legs to an exchange as a pair	*Non-FINRA Member Floor Broker reports an **Option Order Route event (1/2)*** type: MOOR orderKeyDate: 20180417T000000 orderID: RTB910 optionID: XYZ 180810C00001925 eventTimestamp: 20180417T153041.553456 manualFlag: false senderIMID: 456:NFBK	Floor Broker is required to populate the same *pairedOrderID* on each Order Route event. The *multiLegInd* must be populated as 'true' to indicate that the immediately preceding event in the order life cycle is a Multi-Leg order event.

#	Step	Reported Event	Comments
		destination: EXCH1 destinationType: E routedOrderID: PAIR123 session: sess-01 side: S price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: multiLegInd: true pairedOrderID: 55555 *Non-FINRA Member Floor Broker reports an **Order Route event (2/2)*** type: MOOR orderKeyDate: 20180417T000000 orderID: RTB920 optionID: XYZ 180810C00001925 eventTimestamp: 20180417T153041.553456 manualFlag: false senderIMID: 456:NFBK destination: EXCH1 destinationType: E routedOrderID: PAIR456 side: B price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: multiLegInd: true pairedOrderID: 55555	

3.8. Additional Options Reporting Scenarios

3.8.1. 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.
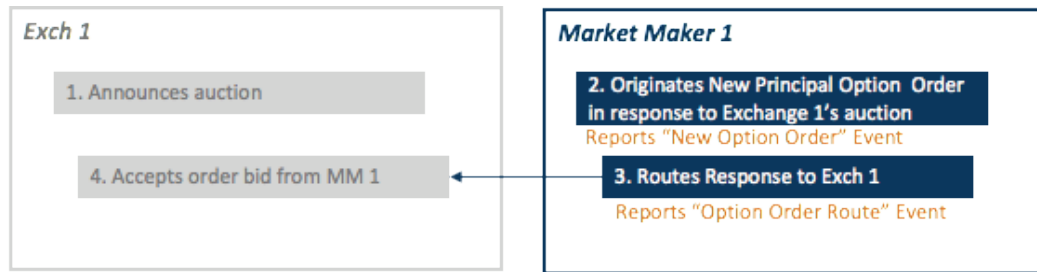
Industry Member Market Maker 1 is required to report:

- 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	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.

#	Step	Reported Event	Comments
		affiliateFlag: false openCloseIndicator: Open representativeInd: N	
3	Market Maker 1 routes response to Exchange 1	*Market Maker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180516T000000 orderID: OA76543 optionID: XYZ 180810C00001925 eventTimestamp: 20180516T133031.1834 senderIMID: 123:MMFIRM1 destination: EXCH1 destinationType: E routedOrderID: RTBID01 session: s12 side: B price: 5 quantity: 10 orderType: LMT timeInForce: IOC tradingSession: REG handlingInstructions: RAR affiliateFlag: false exchOriginCode: M openCloseIndicator: Open	Since the values in the *handlingInstructions* field have not changed from the New Order to the Order Route, MMFIRM1 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	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. Equity Error Account Scenarios

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.
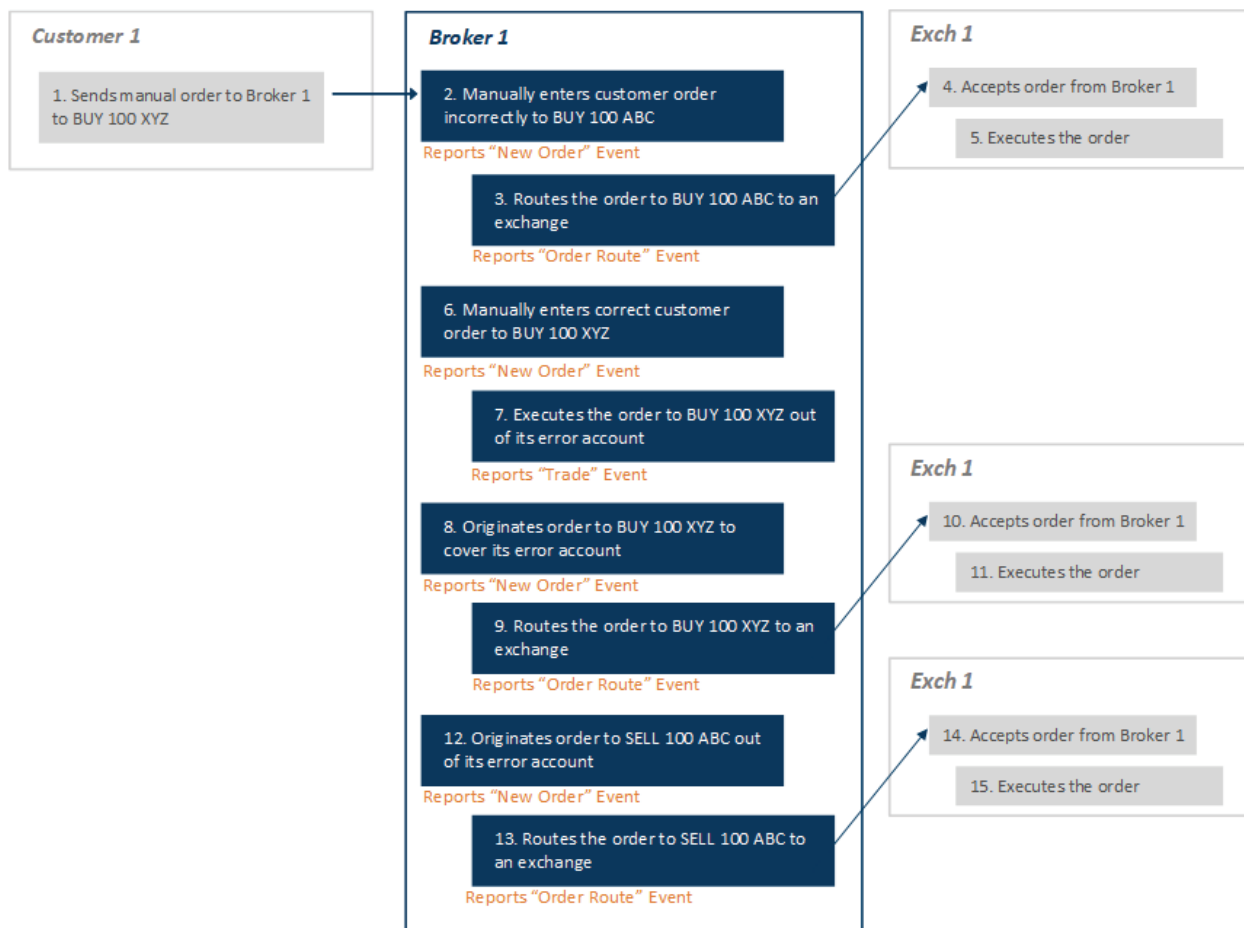
When the firm places an order in error for symbol ABC, Industry Member Broker 1 is required to report:

- 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 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: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: AO123	

#	Step	Reported Event	Comments
		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 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	*Broker 1 reports a **Trade event*** type: MEOT	The *buyDetails* reflect the details of customer/client order XYZ1234. The *sellDetails* reflect the FDID of the firm's error account.

#	Step	Reported Event	Comments
	the customer/client originally placed the order	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 orderID: XYZ1234 side: B sellDetails: side: SL firmDesignatedID: ERR123 accountHolderType: X	
9	Broker 1 originates a Buy order for symbol XYZ to cover 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: 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	*Broker 1 reports an **Order Route event***	

#	Step	Reported Event	Comments
	order to an exchange	type: MEOR orderKeyDate: 20180501T000000 orderID: XYZ5678 symbol: XYZ eventTimestamp: 20180501T153039.134456 manualFlag: false senderIMID: 123: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*	
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	

#	Step	Reported Event	Comments
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: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: AO124 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***	
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 a facilitation account (or other proprietary account to facilitate the correction of the error). The Industry Member then sells 100 shares of XYZ from its facilitation account (or other proprietary account) on an exchange.
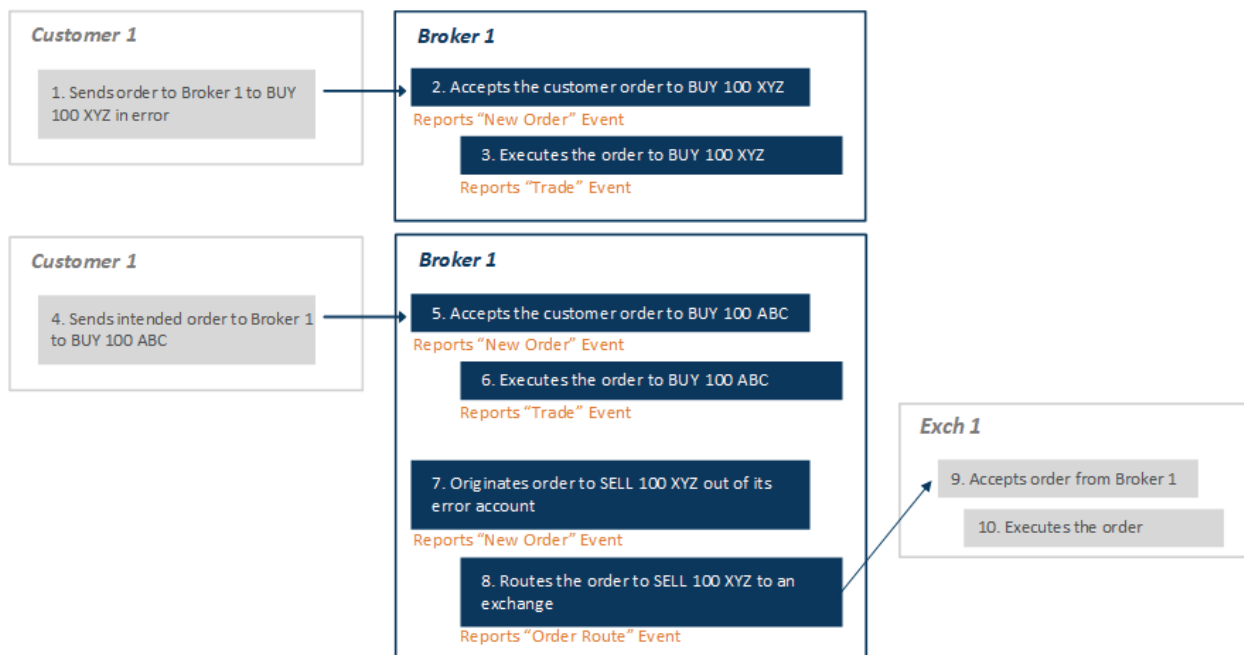
For symbol XYZ, Industry Member Broker 1 is required to report:

- 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 facilitation (or other proprietary) 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 facilitation (or other proprietary) 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**	

#	Step	Reported Event	Comments
		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 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	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
4	The customer/client informs Broker 1 of the error. Broker 1 takes the shares of XYZ into its facilitation (or other proprietary) account	*NA*	The movement of the shares from the customer/client account to the facilitation (or other proprietary) 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 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:	The *buyDetails* reflect the details of customer/client order ABC1234. The *sellDetails* reflect the FDID of the firm's proprietary account.

#	Step	Reported Event	Comments
		20180416T000000 orderID: ABC1234 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	
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: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Since the firm used a facilitation account as opposed to an error account, the *accountHolderType* field must be populated with a value of 'P'.
8	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: 20180501T153038.634456 manualFlag: false senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s5 side: SL price: 9.99 quantity: 100	

#	Step	Reported Event	Comments
		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 affect 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 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: 123:FRMA destination: 456:FRMB destinationType: F routedOrderID: AO123 session: side: B price: 10.00	

#	Step	Reported Event	Comments
		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: 456:FRMB senderIMID: 123:FRMA senderType: F routedOrderID: AO123 affiliateFlag: false deptType: A 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	The *buyDetails* reflect the details of Broker 1's order O34567. The *sellDetails* reflect the FDID of Broker 2's prop account.

#	Step	Reported Event	Comments
		sideDetailsInd: NA buyDetails: orderKeyDate: 20180416T000000 orderID: O34567 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	
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 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.
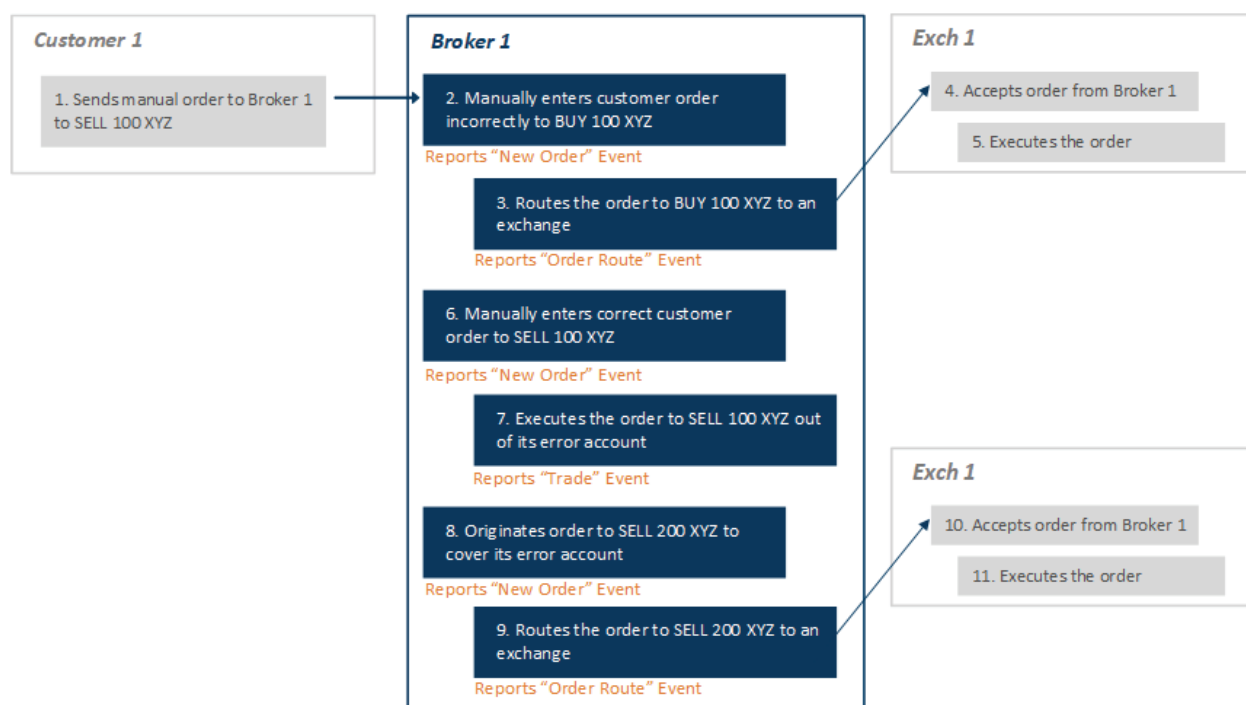
When the firm places an order in error to buy symbol XYZ, Industry Member Broker 1 is required to report:

- 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		
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	

#	Step	Reported Event	Comments
		eventTimestamp: 20180501T153036.634456 manualFlag: false senderIMID: 123: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 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	

#	Step	Reported Event	Comments
		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 tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: side: B firmDesignatedID: ERR123 accountHolderType: X sellDetails: orderKeyDate: 20180501T000000 orderID: XYZ1235 side: SL	The *sellDetails* reflect the details of customer/client order XYZ1235. The *buyDetails* reflect the FDID of the firm's error account.
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	

#	Step	Reported Event	Comments
		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: 123:FRMA destination: EXCH1 destinationType: E 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.

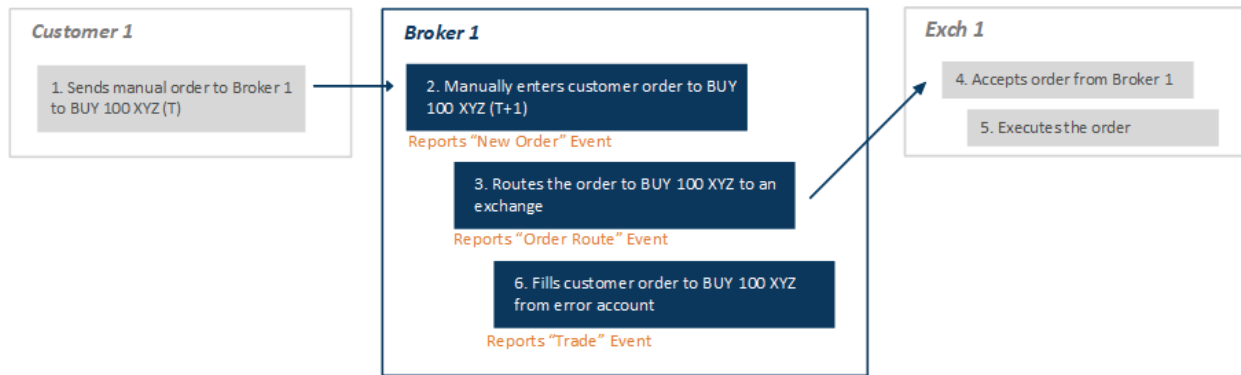| #	Step	Reported Event	Comments
1	Customer/client manually routes an order to Broker 1		
2	Broker 1 accepts the customer order, but does not enter the order until T+1	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180502T000000 orderID: XYZ1234 symbol: XYZ eventTimestamp: 20180501T153035.634456 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	

#	Step	Reported Event	Comments
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: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: AO123 session: s1 side: B 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	The *buyDetails* reflect the details of customer/client order XYZ1234. The *sellDetails* reflect the FDID of the firm's error account.

#	Step	Reported Event	Comments
		capacity: P tapeTradeID: TRF127 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180502T000000 orderID: XYZ1234 side: B sellDetails: side: SL firmDesignatedID: ERR123 accountHolderType: X	

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.
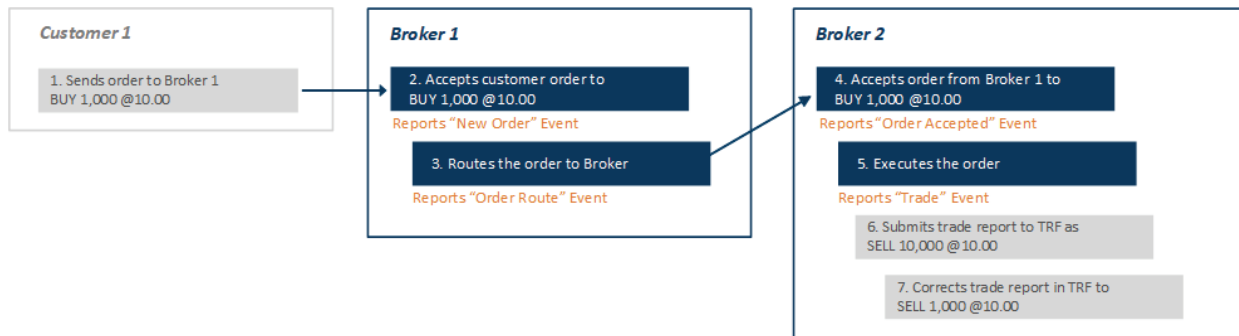
Industry Member Broker 1 is required to report:

- 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 7.6 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 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	

#	Step	Reported Event	Comments
		senderIMID: 123:FRMA destination: 456: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: 456:FRMB senderIMID: 123:FRMA senderType: F routedOrderID: AO123 affiliateFlag: false deptType: T 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	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
		cancelFlag: false cancelTimestamp: quantity: 1,000 price: 10.00 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180501T000000 orderID: O34567 side: B sellDetails: 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*	

4.2. Options Error Account Scenarios

4.2.1. Industry Member Purchases the Wrong Option 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 option in error. In this scenario, the customer/client places an order to buy 10 contracts of XYZZ 191220C00095000 over the phone, and in error, the Industry Member enters an order to buy 10 contracts of ABCD 191220C00095000.

Once the Industry Member realizes the error, it moves 10 contracts of ABCD 191220C00095000 from the customer's/client's account to its error account, and creates the correct customer order to buy 10 contracts of XYZZ 191220C00095000. The Industry Member then originates a proprietary order in its error account to fill the order at the price the option was trading when the customer/client originally placed the order, and routes the orders as a pair to the exchange for execution.

The Industry Member then purchases 10 contracts of XYZZ 191220C00095000 on the exchange for its error account to cover the contracts sold to the customer/client, and sells the 10 contracts of ABCD 191220C00095000 purchased in error on the exchange from its error account.

Customer 1	Broker 1	Exch 1
1. Sends order to Broker 1 to BUY 10 XYZ call option	2. Enters incorrect customer order to BUY 10 ABC Calls *Reports "New Option Order" Event*	4. Accepts order from Broker 1
	3. Routes the order to BUY 10 ABC *Reports "Option Order Route" Event*	5. Executes the order
	6. Originates the customer's correct order for BUY 10 XYZ call option *Reports "New Option Order" Event*	
	7. Originates a prop order for SELL 10 XYZ call option out of the firm error account *Reports "New Option Order" Event*	9. Accepts paired order from Broker 1
	8. Routes the BUY/SELL 10 XYZ to the exchange as a pair *Reports "Option Order Route" Events*	10. Executes the order
	11. Originates a prop order for BUY 10 XYZ call option for the firm error account *Reports "New Option Order" Event*	13. Accepts order from Broker 1
	12. Routes the prop option order to the Exchange *Reports "Option Order Route" Event*	14. Executes the order
	15. Originates order to SELL 10 ABC out of its error account from the incorrect order *Reports "New Option Order" Event*	17. Accepts order from Broker 1
	16. Routes the order to SELL 10 ABC to an exchange *Reports "Option Order Route" Event*	18. Executes the order

When the firm places an order in error for option ABCD 191220C00095000, Industry Member Broker 1 is required to report:

- The entry of the customer/client order to buy the wrong option (New Option Order event)
- The route of the order to buy the wrong option to an exchange (Option 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 option XYZZ 191220C00095000 (New Option Order event)
- The origination of a proprietary order in its error account to sell XYZZ 191220C00095000 to the customer at the price the option was trading when the customer order was originally placed (New Option Order event)

- The origination of an order to buy XYZZ 191220C00095000 to cover the firm's error account (New Option Order event)
- The route of the buy order for XYZZ 191220C00095000 to an exchange (Option Order Route event)

- The origination of an order to sell the contracts of ABCD 191220C00095000 purchased in error (New Option Order event)
- The route of the sell order for ABCD 191220C00095000 to an exchange (Option Order Route event)

The movement of the contracts 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 10 contracts of XYZZ 191220C00095000		
2	Broker 1 enters an order to buy the wrong security	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20180417T000000 orderID: C56743 optionID: ABCD 191220C00095000 eventTimestamp: 20180417T153033 manualFlag: true electronicTimestamp: 20180417T153033.234456 deptType: A side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order in the incorrect security to an exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180417T000000 orderID: C56743	

#	Step	Reported Event	Comments
		optionID: ABCD 191220C00095000 eventTimestamp: 20180417T153033.234456 manualFlag: false senderIMID: 123:BRK1 destination: EXCH1 destinationType: E routedOrderID: AO226 session: sess-01 side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
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***	
6	Broker 1 realizes the error and moves the contracts of ABCD 191220C00095000 to its error account	*NA*	The movement of the contracts 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 Option Order event*** type: MONO orderKeyDate: 20180417T000000 orderID: C56987 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154536.234456 manualFlag: false deptType: A side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234	

#	Step	Reported Event	Comments
		accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
8	Broker 1 reports the origination of a proprietary sell order in its error account	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20180417T000000 orderID: P56658 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154536.234456 manualFlag: false deptType: T side: S price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ERRACT accountHolderType: X affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
9	Broker 1 routes the orders as a pair to the exchange for execution	*Broker 1 reports an **Option Order Route event (1/2)*** type: MOOR orderKeyDate: 20180417T000000 orderID: C56987 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154536.234456 senderIMID: 456: BRKRA destination: EXCHANGE destinationType: E routedOrderID: RT4210 session: EFGH4567 side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417	

#	Step	Reported Event	Comments
		tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open pairedOrderID: ORD234 *Broker 1 reports an **Option Order Route event (2/2)*** type: MOOR orderKeyDate: 20180417T000000 orderID: C56987 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154536.234456 senderIMID: 456: BRKRA destination: EXCHANGE destinationType: E routedOrderID: RT4210 session: EFGH4567 side: S price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open pairedOrderID: ORD234	
10	Exch 1 accepts the paired option orders from Broker 1	*Exchange reports a Participant **Simple Option Order Accepted events***	
11	Exch 1 executes the full quantity of the option order	*Exchange reports a Participant **Simple Option Trade event***	
12	Broker 1 originates a proprietary buy order to cover its error account	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20180417T000000 orderID: P56743 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154836.234456 manualFlag: false	

#	Step	Reported Event	Comments
		deptType: T side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ERRACT accountHolderType: X affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
13	Broker 1 routes the order to an exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180417T000000 orderID: P56743 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154836.234456 manualFlag: false senderIMID: 123:BRK1 destination: EXCH1 destinationType: E routedOrderID: AO228 session: sess-01 side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
14	Exch 1 accepts the option order from Broker 1	*Exchange reports a Participant **Simple Option Order Accepted event***	
15	Exch 1 executes the full quantity of the option order	*Exchange reports a Participant **Simple Option Trade event***	
16	Broker 1 originates a proprietary sell order to sell the contracts purchased in error	*Broker 1 reports a **New Option Order event*** type: MONO	

#	Step	Reported Event	Comments
		orderKeyDate: 20180417T000000 orderID: P56052 optionID: ABCD 191220C00095000 eventTimestamp: 20180417T155136.234456 manualFlag: false deptType: T side: S price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ERRACT accountHolderType: X affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
17	Broker 1 routes the order to an exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180417T000000 orderID: P56052 optionID: ABCD 191220C00095000 eventTimestamp: 20180417T155136.234456 manualFlag: false senderIMID: 123:BRK1 destination: EXCH1 destinationType: E routedOrderID: AO229 session: sess-01 side: S price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
18	Exch 1 accepts the option order from Broker 1	*Exchange reports a Participant **Simple Option Order Accepted event***	
19	Exch 1 executes the	*Exchange reports a Participant*	

#	Step	Reported Event	Comments
	full quantity of the option order	**_Simple Option Trade event_**	

4.2.2. Price Adjustment of a Customer Order

This scenario illustrates the CAT reporting requirements when an Industry Member makes a price adjustment to a customer/client order routing a new order to the exchange. In this scenario, Industry Member Broker 1 receives a customer/client order to buy 10 contracts of XYZZ 191220C00095000, and routes the order to the exchange for execution at a price of 10.00 per contract.

Industry Member Broker 1 determines that the customer/client should have received a price of 9.98 per contract, and moves the 10 contracts executed at a price of 10.00 from the customer account to its error account. To effect the price adjustment to the customer, Industry Member Broker 1 creates a new customer order to buy 10 contracts of XYZZ 191220C00095000 at 9.98, and originates new proprietary order to sell 10 contracts to the customer out of its error account at 9.98. The orders are routed to the exchange as a pair for execution.
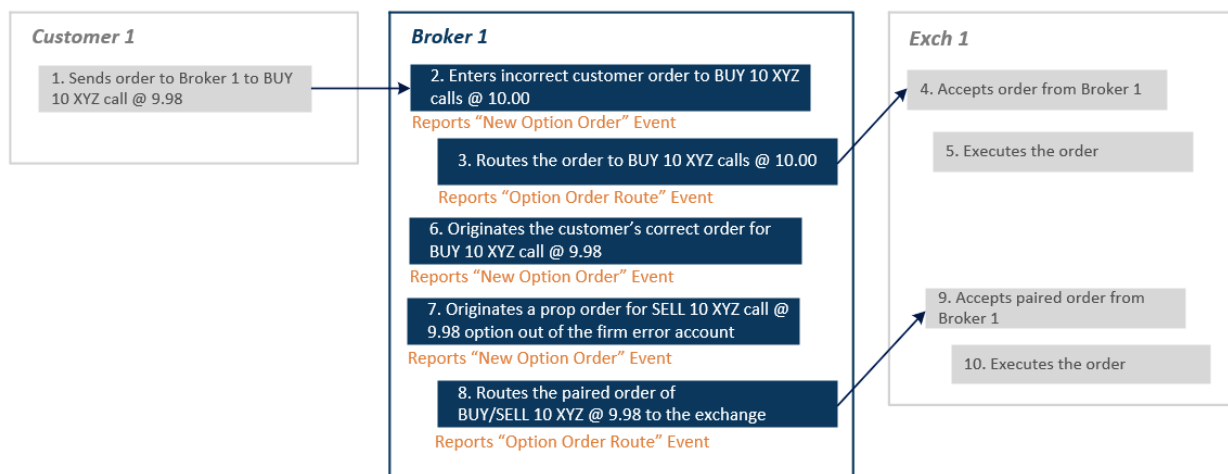
When the customer order is filled at the wrong price, Industry Member Broker 1 is required to report:

- The receipt of the original customer/client order (New Option Order event)
- The route of the original customer/client order to the exchange (Option Order Route event)

When the firm realizes the error and corrects the price, Industry Member Broker 1 is required to report:

- The origination of a new customer order at the correct price (New Option Order event)
- The origination of a proprietary order in its error account to sell the contracts to the customer at the correct price (New Option Order event)

The movement of the contracts 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 10 contracts @9.98		
2	Broker 1 accepts the customer order and enters the wrong price	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20180417T000000 orderID: C56743 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T153033 manualFlag: true electronicTimestamp: 20180417T153033.234456 deptType: A side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to the exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180417T000000 orderID: C56743 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T153033.234456 manualFlag: false senderIMID: 123:BRK1 destination: EXCH1 destinationType: E routedOrderID: AO226 session: sess-01	

#	Step	Reported Event	Comments
		side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
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 @ 10.00	*Exchange reports a Participant* ***Simple Option Trade event***	
6	Broker 1 realizes the error and moves the contracts executed @10.00 to its error account	*NA*	The movement of the contracts 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 customer/client order at the correct price	*Broker 1 reports a* ***New Option Order event*** type: MONO orderKeyDate: 20180417T000000 orderID: C56987 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154536.234456 manualFlag: false deptType: A side: B price: 9.98 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
8	Broker 1 reports the origination of a proprietary order in its error account to sell the contracts to the	*Broker 1 reports a* ***New Option Order event*** type: MONO	

#	Step	Reported Event	Comments
	customer at the correct price	orderKeyDate: 20180417T000000 orderID: P56658 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154536.234456 manualFlag: false deptType: T side: S price: 9.98 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ERRACT accountHolderType: X affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
9	Broker 1 routes the orders as a pair to the exchange for execution	*Broker 1 reports an **Option Order Route event (1/2)*** type: MOOR orderKeyDate: 20180417T000000 orderID: C56987 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154536.234456 senderIMID: 456: BRKRA destination: EXCHANGE destinationType: E routedOrderID: RT4210 session: EFGH4567 side: B price: 9.98 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open pairedOrderID: ORD890 *Broker 1 reports an **Option Order Route event (2/2)***	

#	Step	Reported Event	Comments
		type: MOOR orderKeyDate: 20180417T000000 orderID: P56658 optionID: XYZZ 191220C00095000 eventTimestamp: 20180418T154536.234456 senderIMID: 456: BRKRA destination: EXCHANGE destinationType: E routedOrderID: RT4215 session: EFGH4567 side: S price: 9.98 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG exchOriginCode: F affiliateFlag: false openCloseIndicator: Open pairedOrderID: ORD890	
10	Exch 1 accepts the option order from Broker 1	*Exchange reports a Participant* ***Simple Option Order Accepted event***	
11	Exch 1 executes the full quantity of the option order	*Exchange reports a Participant* ***Simple Option Trade event***	

4.2.3. 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 10 contracts of XYZZ 191220C00095000 over the phone, and in error, the Industry Member enters an order to buy 10 contracts of XYZZ 191220C00095000. The order is routed to an exchange for execution.

Once the Industry Member realizes the error, it moves the 10 contracts purchased in error from the customer's/client's account to its error account and creates the correct customer order to sell 10 contracts of XYZZ 191220C00095000. The Industry Member then originates a proprietary order in its error account to fill the sell order at the price the option was trading when the customer/client originally placed the order, and routes the orders as a pair to the exchange for execution.

The Industry Member then sells 20 contracts out of its error account on an exchange to cover the contracts acquired from the customer/client.
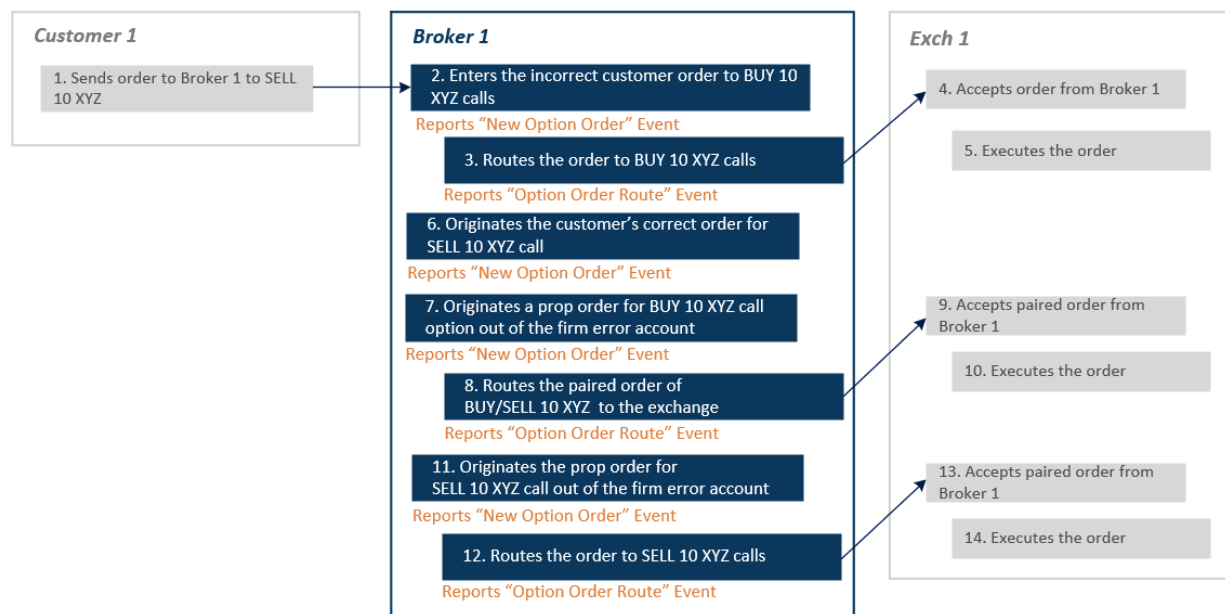
When the firm places an order in error to buy XYZZ 191220C00095000, Industry Member Broker 1 is required to report:

- The entry of the customer/client order to buy the contracts in error (New Option Order event)
- The route of the buy order to an exchange (Option 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 contracts (New Option Order event)
- The origination of a proprietary order in its error account to buy the contracts from the customer at the price the option was trading when the customer order was originally placed (New Option Order event)

- The origination of an order to sell the contracts acquired from the customer (New Option Order event)
- The route of the sell order to an exchange (Option Order Route event)

The movement of the contracts 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 sell 10 contracts of XYZZ 191220C00095000		
2	Broker 1 enters an order to buy the security in error	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20180417T000000 orderID: C56743 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T153033 manualFlag: true electronicTimestamp: 20180417T153033.234456 deptType: A side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to an exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180417T000000 orderID: C56743 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T153033.234456 manualFlag: false senderIMID: 123:BRK1 destination: EXCH1 destinationType: E routedOrderID: AO226 session: sess-01 side: B price: 10.00	

#	Step	Reported Event	Comments
		quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
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**	
6	Broker 1 realizes the error and moves the contracts of ABCD 191220C00095000 to its error account	*NA*	The movement of the contracts 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 Option Order event** type: MONO orderKeyDate: 20180417T000000 orderID: C56987 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154536.234456 manualFlag: false deptType: A side: S price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
8	Broker 1 reports the origination of a proprietary buy order in its error account	*Broker 1 reports a* **New Option Order event** type: MONO orderKeyDate: 20180417T000000 orderID: P56658	

#	Step	Reported Event	Comments
		optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154536.234456 manualFlag: false deptType: T side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ERRACT accountHolderType: X affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
9	Broker 1 routes the orders as a pair to the exchange for execution	*Broker 1 reports an **Option Order Route event (1/2)*** type: MOOR orderKeyDate: 20210528T000000 orderID: P56658 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154540.234456 senderIMID: 456: BRKRA destination: EXCHANGE destinationType: E routedOrderID: RT4210 session: EFGH4567 side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open pairedOrderID: ORD123 *Broker 1 reports an **Option Order Route event (2/2)*** type: MOOR orderKeyDate: 20210528T000000	

#	Step	Reported Event	Comments
		orderID: C56987 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154540.234456 senderIMID: 456: BRKRA destination: EXCHANGE destinationType: E routedOrderID: RT4215 session: EFGH4567 side: S price: 10.00 quantity: 10 orderType: LMT timeInForce: timeInForce: DAY=20180417 tradingSession: REG exchOriginCode: F affiliateFlag: false openCloseIndicator: Open pairedOrderID: ORD123	
10	Exch 1 accepts the paired option orders from Broker 1	*Exchange reports a Participant* ***Simple Option Order Accepted events***	
11	Exch 1 executes the full quantity of the option order	*Exchange reports a Participant* ***Simple Option Trade event***	
12	Broker 1 originates a proprietary sell order to sell the incorrectly purchased contracts out of its error account	*Broker 1 reports a* ***New Option Order event*** type: MONO orderKeyDate: 20180417T000000 orderID: P56743 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154836.234456 manualFlag: false deptType: T side: S price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ERRACT accountHolderType: X affiliateFlag: false negotiatedTradeFlag: false	

#	Step	Reported Event	Comments
		representativeInd: N	
13	Broker 1 routes the order to an exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20180417T000000 orderID: P56743 optionID: XYZZ 191220C00095000 eventTimestamp: 20180417T154836.234456 manualFlag: false senderIMID: 123:BRK1 destination: EXCH1 destinationType: E routedOrderID: AO228 session: sess-01 side: S price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
14	Exch 1 accepts the option order from Broker 1	*Exchange reports a Participant **Simple Option Order Accepted event***	
15	Exch 1 executes the full quantity of the option order	*Exchange reports a Participant **Simple Option Trade event***	

4.2.4. 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 10 contracts of XYZZ 191220C00095000 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, the Industry Member originates a proprietary order in its error account to fill the buy order at the price the option was trading when the customer/client originally placed the order, and routes the orders as a pair to the exchange for execution.

When entering the original customer order, Industry Member Broker 1 is required to report:

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

When the firm corrects the price, Industry Member Broker 1 is required to report:

- The origination of a new customer order at the correct price (New Option Order event)
- The origination of a proprietary order in its error account to sell the contracts to the customer at the correct price (New Option Order event)

The movement of the contracts 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 Option Order event** type: MONO orderKeyDate: 20211001T000000 orderID: C56743 optionID: XYZZ 211220C00095000 eventTimestamp: 20211001T153033 manualFlag: true electronicTimestamp:	

#	Step	Reported Event	Comments
		20211002T103033.234456 deptType: A side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20211002 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes the order to the exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20211001T000000 orderID: C56743 optionID: XYZZ 211220C00095000 eventTimestamp: 20211001T103033 manualFlag: false electronicTimestamp: 20211002T103033.234459 senderIMID: 123:BRK1 destination: EXCH1 destinationType: E routedOrderID: AO226 session: sess-01 side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20211002 tradingSession: REG affiliateFlag: false isoInd: NA	
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***	

#	Step	Reported Event	Comments
6	Broker 1 moves the contracts executed to its error account for a price adjustment	*NA*	The movement of the contracts 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 customer/client order at yesterday's price	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20211002T000000 orderID: C56987 optionID: XYZZ 211220C00095000 eventTimestamp: 20211002T154536.234456 manualFlag: false deptType: A side: B price: 9.98 quantity: 10 orderType: LMT timeInForce: DAY=20211002 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
8	Broker 1 reports the origination of a proprietary order in its error account to sell the contracts to the customer at yesterday's price	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20211002T000000 orderID: P56658 optionID: XYZZ 211220C00095000 eventTimestamp: 20211002T154536.234456 manualFlag: false deptType: T side: S price: 9.98 quantity: 10 orderType: LMT timeInForce: DAY=20211002 tradingSession: REG custDspIntrFlag: false firmDesignatedID: ERRACT	

#	Step	Reported Event	Comments
		accountHolderType: X affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
9	Broker 1 routes the orders as a pair to the exchange for execution	*Broker 1 reports an **Option Order Route event (1/2)*** type: MOOR orderKeyDate: 20211002T000000 orderID: C56987 optionID: XYZZ 211220C00095000 eventTimestamp: 20211002T154536.234456 senderIMID: 456: BRKRA destination: EXCHANGE destinationType: E routedOrderID: RT4210 session: EFGH4567 side: B price: 10.00 quantity: 10 orderType: LMT timeInForce: DAY=20211002 tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open pairedOrderID: ORD567 *Broker 1 reports an **Option Order Route event (2/2)*** type: MOOR orderKeyDate: 20211002T000000 orderID: P56658 optionID: XYZZ 211220C00095000 eventTimestamp: 20211002T154536.234456 senderIMID: 456: BRKRA destination: EXCHANGE destinationType: E routedOrderID: RT4215 session: EFGH4567 side: S price: 10.00 quantity: 10 orderType: LMT	

#	Step	Reported Event	Comments
		timeInForce: DAY=20211002 tradingSession: REG exchOriginCode: F affiliateFlag: false openCloseIndicator: Open pairedOrderID: ORD567	
10	Exch 1 accepts the option order from Broker 1	*Exchange reports a Participant* ***Simple Option Order Accepted event***	
11	Exch 1 executes the full quantity of the option order	*Exchange reports a Participant* ***Simple Option Trade event***	

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 2.4.2 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.
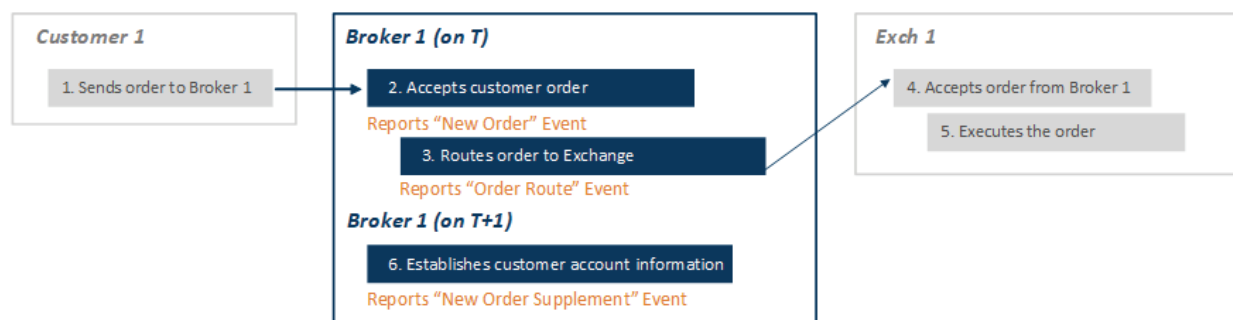
Industry Member Broker 1 is required to report:

- 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: 123: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	

#	Step	Reported Event	Comments
		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.
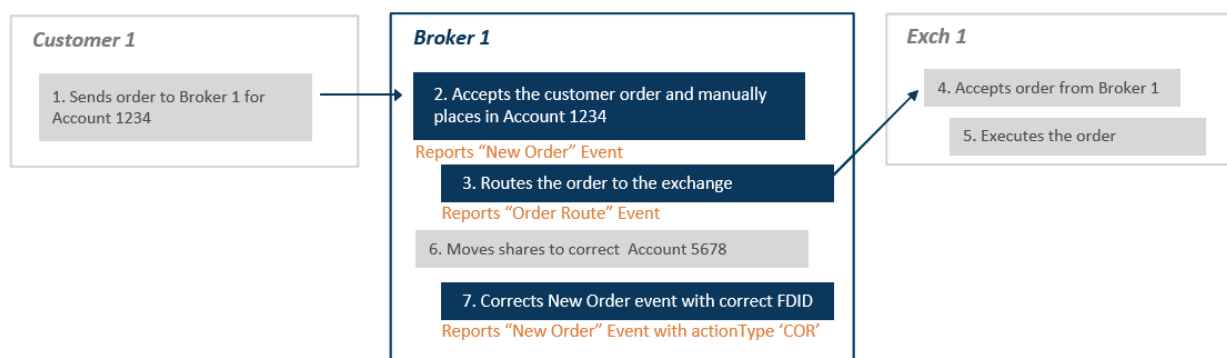
Industry Member Broker 1 is required to report:

- 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 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	

#	Step	Reported Event	Comments
		CATReporterIMID: BRK1 orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.634556 manualFlag: false senderIMID: 123: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 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	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 would not have to subsequently submit the corrected MENO event in this step.

#	Step	Reported Event	Comments
		price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST5678 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	

5.1.3. Customer Requests a Change in FDID Prior to Allocation

This scenario illustrates the CAT reporting requirements when a customer requests a change in the account prior to allocation. In this scenario, the Industry Member receives a customer order with instructions to place the order in a specific account. The firm routes the order to an exchange for execution. The Industry Member reports the order to CAT with the FDID of the account instructed by the customer. After the order is reported to CAT, the customer realizes the incorrect account information was given, and the Industry Member moves the shares to the correct account as an accommodation to the customer.
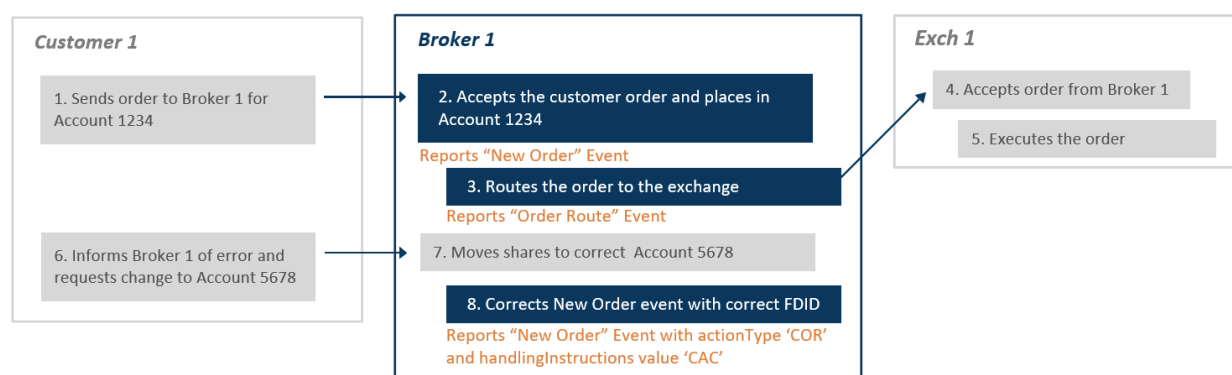
Industry Member Broker 1 is required to report:

- The receipt of the customer/client order with the FDID of the account originally instructed by the customer (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' and *handlingInstructions* value 'CAC')

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'. The correction must contain a *handlingInstructions* value of 'CAC' to indicate that the account correction was initiated by the customer, and was not a firm error. If the Industry Member had processed the customer initiated account correction 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 in Account 1234	*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 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	

#	Step	Reported Event	Comments
		orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.634556 manualFlag: false senderIMID: 123: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	Customer requests account change and Broker 1 moves shares to Account 5678	*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 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	Since the account change was requested by the customer, the *handlingInstructions* field must be populated with a value of 'CAC' to indicate that the change in FDID was not a firm error, and was a customer request. Note that if the Broker was notified and could reflect the change before reporting the original MENO, then it could have provided the correct FDID in its MENO, and would not have to subsequently submit the corrected MENO event in this step.

#	Step	Reported Event	Comments
		orderType: LMT timeInForce: DAY=20180417 tradingSession: REG handlingInstructions: CAC custDspIntrFlag: false firmDesignatedID: CUST5678 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	

6. Allocation Scenarios

This section illustrates reporting requirements when reporting Post-Trade Allocation events. These scenarios are applicable to equivalent equities and options order flows.[2] Allocation events must be reported to CAT for all allocations to a customer account, including DVP/RVP account allocations. Allocations to accounts other than a customer account (e.g. proprietary accounts, step outs, correspondent flips) may optionally be reported to CAT, but must be appropriately marked in the *allocationType* field. Refer to Section 3.3 of the CAT Reporting Technical Specifications for Industry Members, along with Published Allocation Reporting guidance for additional information.

6.1. Allocation Scenarios

6.1.1. Order is Booked Directly in a Customer Account at a Self-Clearing Broker-Dealer

This scenario illustrates the CAT reporting requirements when an order is received or originated directly into a customer's account at a self-clearing broker-dealer. The order could be received directly from the customer either online or as a result of a call to the broker-dealer; or a registered representative of the firm with discretion over the customer's account could originate an order for the customer using his/her discretion. Upon receipt/origination of the order, the broker-dealer routes the order to an exchange for execution. Upon execution, the self-clearing broker-dealer places the shares in the customer's account.
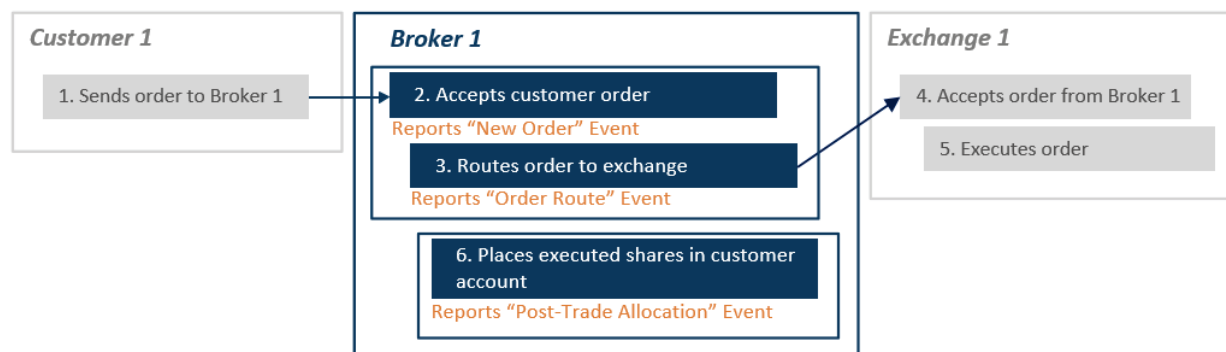
Industry Member Broker 1 is required to report:

- The receipt/origination of the customer order (New Order event)
- Route of the customer order to an exchange (Order Route event)
- The booking of executed shares into the customer's account (Post-Trade Allocation event)

---

[2] There are differences in the allowable values and the fields present on the equities allocations events (MEPA and MEAA) and those present on the options allocation events (MOPA and MOAA). The *optionID* and *occClearingMemberID* fields are only present on the options allocation events, while the *DVPCustodianID* and *symbol* fields are only present on the equity allocation events. Refer to CAT Reporting Technical Specifications for Industry Members for additional information.

Since Broker 1 is self-clearing, Broker 1 has the obligation to report the MEPA 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: O12345 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: CUS001 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	If the order was received manually, the *manualFlag* would be true.
3	Broker 1 routes the order to EXCH1	*Broker 1 reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180417T153036.234556 manualFlag: false senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: s5 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417	

#	Step	Reported Event	Comments
		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***	
6	The booking of shares by Broker 1 into the customer account	*Broker 1 reports a **Post-Trade Allocation event*** type: MEPA allocationKeyDate: 20180419T000000 allocationID: A12345 symbol: XYZ eventTimestamp: 20180419T080000 quantity: 500 price: 10.00 side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417 settlementDate:20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: TIDType: EIN	Since Broker 1 is self-clearing and the FDID of the related New Order is available in its booking system, this field must be populated. In this scenario, the FDID in the New Order event is the same as the FDID in the Post-Trade Allocation event. If the FDID of the related New Order was not available in the booking system, this field would be left blank. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.

6.1.2. Order Originated by Registered Rep with Discretion Over Multiple Customer Accounts at a Self-Clearing Broker-Dealer

This scenario illustrates the CAT reporting requirements when a registered representative of a self-clearing broker-dealer exercises discretion over multiple retail customer accounts and originates a single aggregated order that will be allocated to the specific customer accounts post trade. The order is routed to an exchange for execution. Shares are booked to a firm average price account until the sub-account allocations are made to the individual customer accounts.
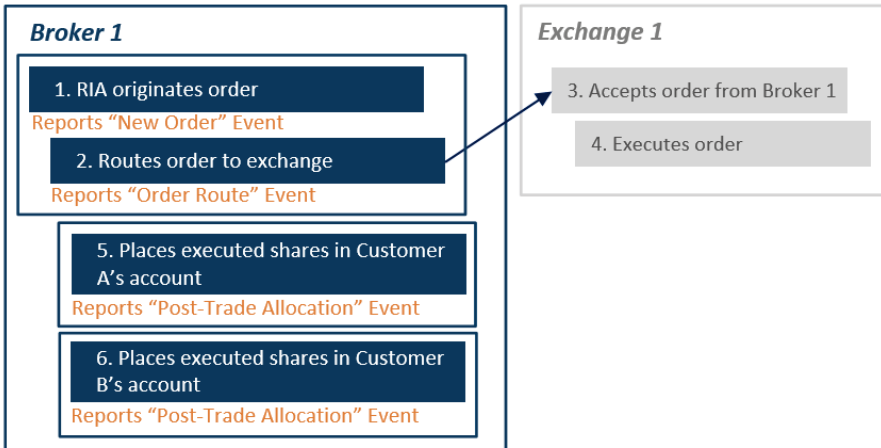
Industry Member Broker 1 is required to report:

- The origination of the aggregated order by the registered rep (New Order event)

- Route of the aggregated order to an exchange (Order Route event)

- The booking of executed shares into each customer account (Post-Trade Allocation events)

Since Broker 1 is self-clearing, Broker 1 has the obligation to report MEPAs to CAT for each allocation to a customer account. The booking of shares related to the aggregated order into the firm average price account is not required to be reported since it is a firm owned or controlled account, but could be voluntarily reported.

#	Step	Reported Event	Comments
1	Registered representative of Broker 1 originates an order	*Broker 1 reports a* **New Order event** type: MENO orderKeyDate: 20180417T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180417T153035.234456 deptType: A side: B price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: AVG123 accountHolderType: V affiliateFlag: false negotiatedTradeFlag: false	The FDID must represent the account in which the order was originated by the registered rep. In this scenario, the registered rep originated the order in a firm average price account, therefore the FDID on the New Order event must be the FDID of the firm average price account.

#	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: O12345 symbol: XYZ eventTimestamp: 20180417T153036.234556 manualFlag: false senderIMID: 123: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	
3	The Exchange accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	
4	The Exchange executes the order	*EXCH1 reports a Participant **Trade event***	
5	The booking of shares by Broker 1 into Customer A's account	*Broker 1 reports a **Post-Trade Allocation event*** type: MEPA allocationKeyDate: 20180419T000000 allocationID: A12345 symbol: XYZ eventTimestamp: 20180419T080000 quantity: 500 price: 10.00 side: B firmDesignatedID: CUS123 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419	Since Broker 1 is self-clearing and the FDID of the related New Order is available in its booking system, this field must be populated. If the FDID of the related New Order was not available in the booking system, this field would be left blank. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.

#	Step	Reported Event	Comments
		allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: AVG123 allocationInstructionTime: TIDType: SSN	
6	The booking of shares by Broker 1 into Customer B's account	*Broker 1 reports a **Post-Trade Allocation event*** type: MEPA allocationKeyDate: 20180419T000000 allocationID: A45678 symbol: XYZ eventTimestamp: 20180419T080000 quantity: 500 price: 10.00 side: B firmDesignatedID: CUS456 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: AVG123 allocationInstructionTime: TIDType: SSN	Since Broker 1 is self-clearing and the FDID of the related New Order is available in its booking system, this field must be populated. If the FDID of the related New Order was not available in the booking system, this field would be left blank. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.

6.1.3. DVP Allocations by a Self-Clearing Broker-Dealer to Institutional Customer Accounts Held at a Different Firm

This scenario illustrates the CAT reporting requirements when an institution places an order with a self-clearing executing firm Broker 1. The institution gives instructions to DVP the shares to two different custodial broker-dealers (CSTA and CSTB). The institution provides allocation instructions directly to CSTA and CSTB for allocation to the final customer accounts at the custodian broker-dealers.
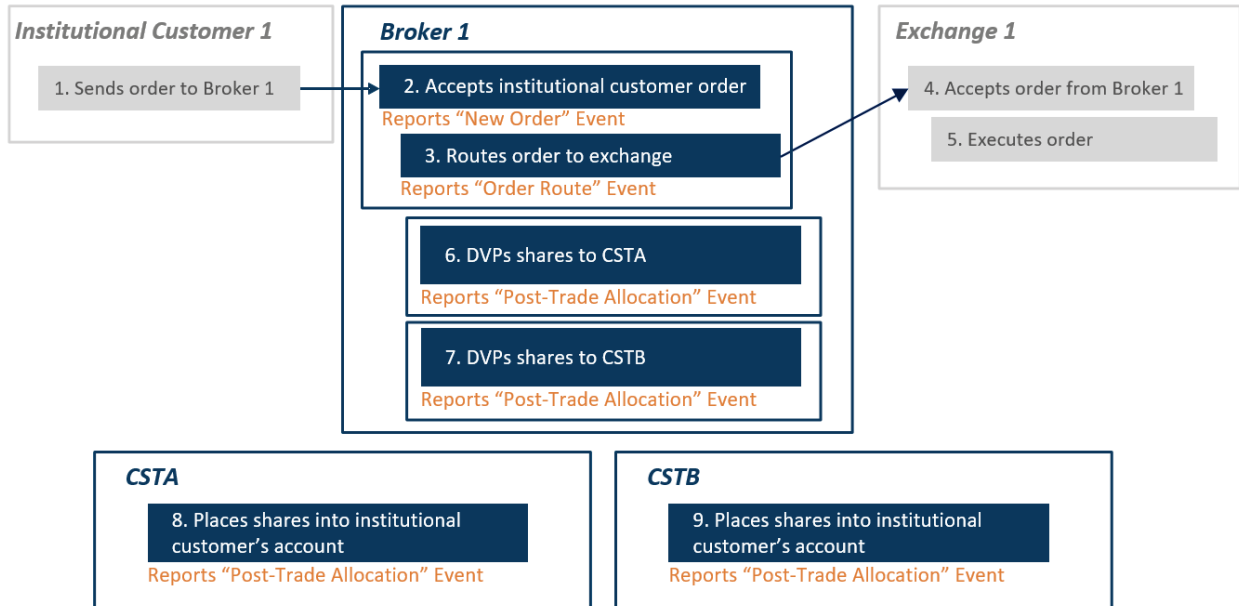
Industry Member Broker 1 is required to report:

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

- Route of the order to an exchange (Order Route event)

- The DVP of shares to CSTA and CSTB (Post-Trade Allocation events)

CSTA and CSTB are required to report:

- The booking of shares into the institutional customer's account (Post-Trade Allocation events)

#	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: 10000 orderType: LMT	In this scenario, Broker 1 uses a Relationship ID as its FDID for the institution.

#	Step	Reported Event	Comments
		timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: RLT123 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: O12345 symbol: XYZ eventTimestamp: 20180417T153036.234556 manualFlag: false senderIMID: 123:FRMA destination: EXCH1 destinationType: E routedOrderID: XYZO555 session: s5 side: B price: 10.00 quantity: 10000 orderType: LMT timeInForce: DAY=20180417 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 events***	
6	The DVP of shares by Broker 1 to CSTA	*Broker 1 reports a **Post-Trade Allocation event*** type: MEPA allocationKeyDate: 20180417T000000 allocationID: A12345 symbol: XYZ eventTimestamp: 20180417T200000 quantity: 5000	Broker 1 is required to report DVP transactions to CAT because the DVP account is a customer account. The *allocationType* field must be populated with a value of 'DVP'. The *DVPCustodianID* field must be populated. Since the FDID of the related New Order is available in Broker 1's booking system, this field must be populated.

#	Step	Reported Event	Comments
		price: 10.00 side: B firmDesignatedID: DVP123 institutionFlag: true tradeDate: 20180417 settlementDate:20180419 allocationType: DVP DVPCustodianID: CSTA correspondentCRD: newOrderFDID: RLT123 allocationInstructionTime: TIDType: SSN	If the FDID on the related New Order event was not available in the booking system, the *newOrderFDID* field would be left blank. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.
7	The DVP of shares by Broker 1 to CSTB	*Broker 1 reports a **Post-Trade Allocation event*** type: MEPA allocationKeyDate: 20180417T000000 allocationID: A23446 symbol: XYZ eventTimestamp: 20180417T200000 quantity: 5000 price: 10.00 side: B firmDesignatedID: DVP456 institutionFlag: true tradeDate: 20180417 settlementDate: 20180419 allocationType: DVP DVPCustodianID: CSTB correspondentCRD: newOrderFDID: RLT123 allocationInstructionTime: TIDType: EIN	Broker 1 is required to report DVP transactions to CAT because the DVP account is a customer account. The *allocationType* field must be populated with a value of 'DVP'. The *DVPCustodianID* field must be populated. Since the FDID of the related New Order is available in Broker 1's booking system, this field must be populated. If the FDID on the related New Order event was not available in the booking system, the *newOrderFDID* field would be left blank. The *eventTimestamp* on an Allocation event should reflect the date and time when the shares allocated are booked into the customer's account. See [FAQ U2](#) for additional information. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.
8	The booking of shares into the institutional customer's account by CSTA	*CSTA reports a **Post-Trade Allocation event*** type: MEPA allocationKeyDate: 20180417T000000 allocationID: A4567 symbol: XYZ eventTimestamp: 20180417T210000 quantity: 5000	Because CSTA does not have Broker 1's FDID, the newOrderFDID will not be populated. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.

#	Step	Reported Event	Comments
		price: 10.00 side: B firmDesignatedID: INS123 institutionFlag: true tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: allocationInstructionTime: TIDType: EIN	
9	The booking of shares into the institutional customer's account by CSTB	*CSTB reports a **Post-Trade Allocation event*** type: MEPA allocationKeyDate: 20180419T000000 allocationID: A5678 symbol: XYZ eventTimestamp: 20180419T090000 quantity: 5000 price: 10.00 side: B firmDesignatedID: INS456 institutionFlag: true tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: allocationInstructionTime: TIDType: EIN	Because CSTB does not have Broker 1's FDID, the newOrderFDID will not be populated. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.

6.1.4. Order is Booked Directly in a Customer Account at an Introducing Broker

This scenario illustrates the CAT reporting requirements when a customer with an account at an introducing broker places an order, and the introducing broker automatically routes the order to its clearing firm for further handling. The clearing firm routes the order to an exchange for execution.
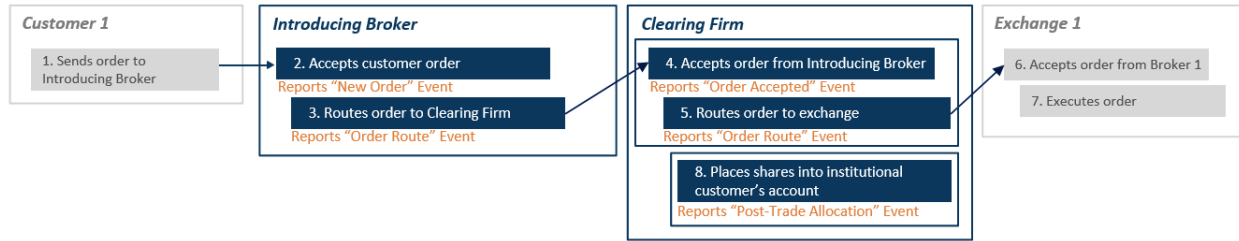
Industry Member Introducing Broker is required to report:

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

- Route of the order to the clearing firm (Order Route event)

The Clearing Firm is required to report:

- Receipt of the order from the Introducing Broker (Order Accepted event)

- Route of the order to an exchange (Order Route event)

- The booking of shares into the customer's account (Post-Trade Allocation event)

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Introducing Broker	*NA*	
2	Introducing Broker accepts the customer order	*Introducing Broker 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 timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUS001 accountHolderType: I affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	

#	Step	Reported Event	Comments
3	Introducing Broker routes the order to Clearing Firm	*Introducing Broker reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180417T153036.234556 manualFlag: false senderIMID: 123:FRMA destination: 456:CLFA destinationType: F routedOrderID: XYZO555 session: side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
4	Clearing Firm accepts the order from Introducing Broker	*CLFA reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153036.534556 manualFlag: false receiverIMID: 456:CLFA senderIMID: 123:FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: false deptType: A side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	

#	Step	Reported Event	Comments
5	Clearing firm routes to exchange	*Clearing Firm reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O45678 symbol: XYZ eventTimestamp: 20180417T153037.234556 manualFlag: false senderIMID: 456:CLFA destination: EXCH1 destinationType: E routedOrderID: XYZO444 session: s5 side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG affiliateFlag: false isoInd: NA	
6	The Exchange accepts the order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	
7	The Exchange executes the order	*EXCH1 reports a Participant **Trade event***	
8	The booking of shares by Clearing firm into the customer account	*Clearing Firm reports a **Post-Trade Allocation event*** type: MEPA allocationKeyDate: 20180419T000000 allocationID: A12345 symbol: XYZ eventTimestamp: 20180419T080000 quantity: 500 price: 10.00 side: B firmDesignatedID: INS001 institutionFlag: false tradeDate: 20180417 settlementDate:20180419 allocationType: CUS DVPCustodianID:	The Clearing Firm will use its assigned FDID for the MEPA, which may be different than the FDID assigned by the Introducing Firm. If the Clearing Firm has the Introducing Firm's FDID of the related new order event available in its booking system, then it must populate the *newOrderFDID* field. If the Clearing Firm does not have the FDID used by the Introducing Broker to report the MENO, the *newOrderFDID* field may be blank. The *correspondentCRD* field must be populated with the Introducing Broker's CRD number. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.

#	Step	Reported Event	Comments
		correspondentCRD: IBCRD newOrderFDID: allocationInstructionTime: TIDType: SSN	

6.1.5. DVP Allocations by a Clearing Firm of a Non-Clearing Executing Broker

This scenario illustrates the CAT reporting requirements when a non-BD Investment Adviser (e.g., hedge fund, asset manager) is trading for both its pooled fund and a managed account and originates a single aggregated order that is routed to Industry Member non-clearing executing Broker 1. Upon execution by Broker 1, the Clearing Firm of Broker 1 (Clearing Firm) DVPs the shares to two different custodians based on the Investment Adviser's instructions, the Prime Broker for the Investment Adviser's pooled fund (PBA), and the non-broker custodian bank for the managed account (CSTB).
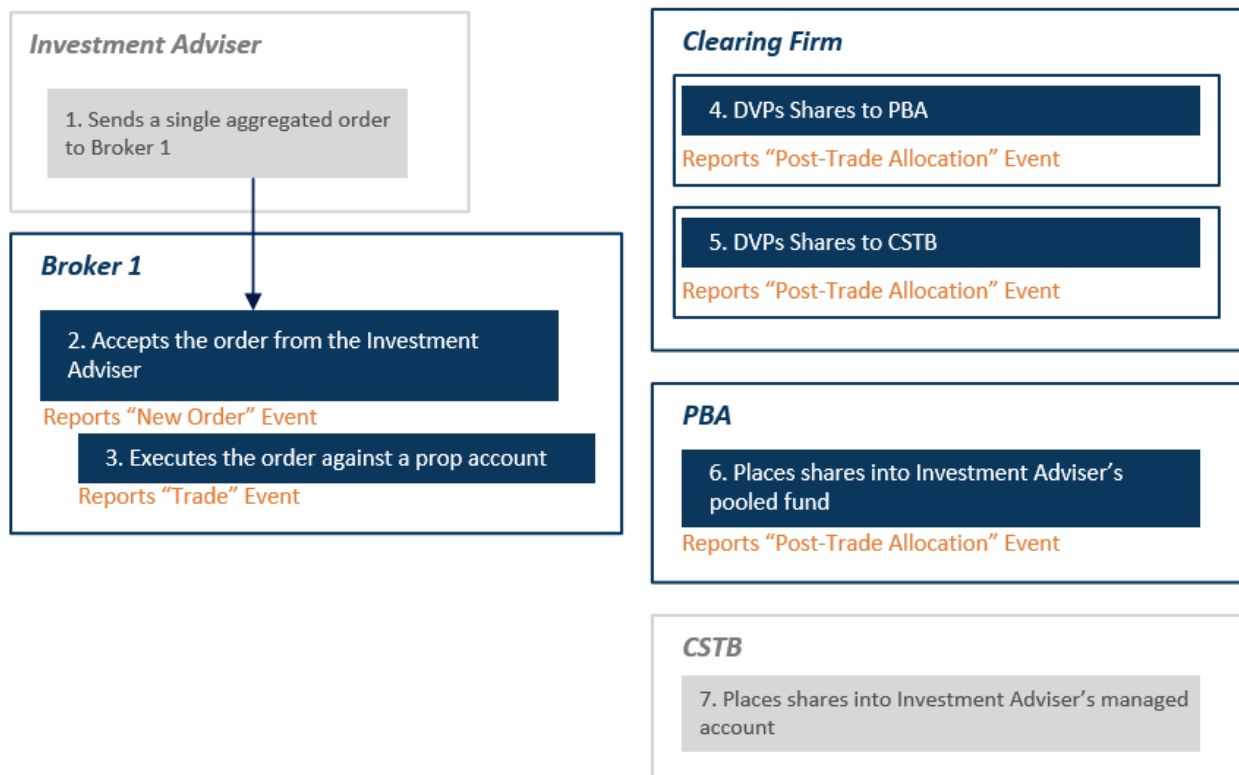
Industry Member Broker 1 is required to report:

- The receipt of the order from the Investment Advisor (New Order event)
- The execution of the order against its proprietary account (Trade event)

Clearing Firm is required to report:

- The DVP of shares to PBA and CSTB (Post-Trade Allocation events)

PBA is required to report:

- The booking of shares into the Investment Adviser's pooled fund (Post-Trade Allocation event)

CSTB is not required to report a Post-Trade Allocation event, as CSTB is not a broker-dealer. The requirements for this scenario would be the same if the Investment Adviser were a non-BD Investment Company

#	Step	Reported Event	Comments
1	Broker 1 receives the order from the Investment Advisor	*Broker 1 reports a **New Order event*** type: MENO orderKeyDate: 20180417T000000 orderID: O12345 symbol: XYZ eventTimestamp: 20180417T153035.234456 deptType: A side: B price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: IA123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
2	Broker 1 executes the order against its own proprietary account	*Broker 1 reports a **Trade event*** type: MEOT tradeKeyDate: 20180417T000000 tradeID: TXYZ555 symbol: XYZ eventTimestamp: 20180417T153037.534556 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 500 price: 10.00 capacity: P	

#	Step	Reported Event	Comments
		tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: O12345 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	
3	Clearing Firm DVPs shares to PBA	*CLFA reports a **Post-Trade Allocation event*** type: MEPA allocationKeyDate: 20180417T000000 allocationID: A12345 symbol: XYZ eventTimestamp: 20180417T200000 quantity: 250 price: 10.00 side: B firmDesignatedID: DVP123 institutionFlag: true tradeDate: 20180417 settlementDate:20180419 allocationType: DVP DVPCustodianID: PBA correspondentCRD: 3456 newOrderFDID: allocationInstructionTime: TIDType: EIN	CFLA is required to report the shares being booked in each of the DVP accounts. The *allocationType* field must be populated with a value of 'DVP'. The *DVPCustodianID* field must be populated. The *correspondentCRD* field must be populated with the CRD number of Broker 1. Because CFLA does not have Broker 1's FDID, the *newOrderFDID* will not be populated. The *eventTimestamp* on an Allocation event should reflect the date and time when the shares allocated are booked into the customer's account. See FAQ U2 for additional information.While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.
4	Clearing Firm DVPs shares to CSTB	*CLFA reports a **Post-Trade Allocation event*** type: MEPA allocationKeyDate: 20180417T000000 allocationID: A12350 symbol: XYZ eventTimestamp: 20180417T200000 quantity: 250	CFLA is required to report the shares being booked in each of the DVP accounts. The *allocationType* field must be populated with a value of 'DVP'. The *DVPCustodianID* field must be populated. Since CSTB is a US bank and is not a registered broker-dealer, this field must represent the DTC number of CSTB. The *correspondentCRD* field must be populated with the CRD number of

#	Step	Reported Event	Comments
		price: 10.00 side: B firmDesignatedID: DVP456 institutionFlag: true tradeDate: 20180417 settlementDate:20180419 allocationType: DVP DVPCustodianID: DCT8 correspondentCRD: 3456 newOrderFDID: allocationInstructionTime: TIDType: EIN	Broker 1. Because CLFA does not have Broker 1's FDID, the *newOrderFDID* will not be populated. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.
5	PBA places shares into the Investment Adviser's pooled fund	*PBA reports a **Post-Trade Allocation event*** type: MEPA allocationKeyDate: 20180419T000000 allocationID: A4567 symbol: XYZ eventTimestamp: 20180419T090000 quantity: 250 price: 10.00 side: B firmDesignatedID: INS123 institutionFlag: true tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: allocationInstructionTime: TIDType: EIN	Because PBA does not have Broker 1's FDID, the *newOrderFDID* will not be populated. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.
6	CSTB places shares into the Investment Adviser's managed account	*N/A*	Since CSTB is not a broker-dealer, CSTB is not required to report an allocation event to CAT.

6.2. Allocation Amendment Scenarios

6.2.1. Allocation is Amended After Initial Booking

This scenario illustrates the CAT reporting requirements when an Industry Member amends an allocation after it is initially booked to the customer's account. In this scenario, an Industry Member allocates 500

shares to a customer. On the same day after the initial booking of shares to the customer account, the Industry Member determines that the customer should have been allocated 800 shares. The reporting of this scenario depends on whether the Industry Member's books and records reflect that the allocation to the customer was amended, or that the original allocation to the customer was cancelled and a new allocation was created.

Option 1:

In Option 1, the Industry Member initially allocates 500 shares to the customer. After the initial booking of shares to the customer account, the Industry Member determines that the customer should have been allocated 800 shares and amends the quantity of the existing customer allocation.

Industry Member Broker 1 is required to report:

- The booking of 500 shares into the customer's account (Post-Trade Allocation event)
- An amendment of the allocation to 800 shares (Amended Allocation event)

Option 2:

In Option 2, the Industry Member initially allocates 500 shares to the customer. After the initial booking of shares to the customer account, the Industry Member determines that the customer should have been allocated 800 shares. The Industry Member cancels the original allocation of 500 shares and books a new allocation for 800 shares to the customer's account.

Industry Member Broker 1 is required to report:

- The booking of the 500 share allocation to the customer's account (Post-Trade Allocation event)
- The cancellation of the original allocation (COR for the original Post-Trade Allocation event with the *cancelFlag* as 'true')

- The booking of a new 800 share allocation to the customer's account (Post-Trade Allocation event)

The requirements outlined in this scenario also apply if there is a change in FDID after the initial allocation occurs. Refer to Scenario 5.1.3 for reporting requirements when a customer requests a change to FDID prior to the initial allocation.

#	Step	Reported Event		Comments
1	Broker 1 allocates 500 shares to the customer's account	*Broker 1 reports a **Post-Trade Allocation event*** actionType: NEW type: MEPA allocationKeyDate: 20180419T000000 allocationID: A12345 symbol: XYZ eventTimestamp: 20180419T190000 cancelFlag: cancelTimestamp: quantity: 500 price: 10.00 side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: TIDType: SSN		While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.
2	Broker 1 determines that the customer should have been allocated 800 shares	***Option 1:*** *Broker 1 reports an **Amended Allocation event*** actionType: NEW type: MEAA allocationKeyDate: 20180419T000000 allocationID: A34567 priorAllocationKeyDate: 20180419T000000 priorAllocationID: A12345 symbol: XYZ eventTimestamp:	***Option 2:*** *Broker 1 reports a COR for its original **Post-Trade Allocation event** with the cancelFlag as 'true'* actionType: COR type: MEPA allocationKeyDate: 20180419T000000 allocationID: A12345 symbol: XYZ eventTimestamp: 20180419T190000 cancelFlag: true	In Option 2, since this cancellation occurred on a subsequent day, Broker 1 is unable to capture the *cancelFlag* and *cancelTimestamp* in its original submission and a COR must be submitted on the MEPA event. If the cancellation occurs after T+3 at 8AM, which is the deadline for timely corrections, Broker 1's COR will not be marked late if the cancelTimestamp is populated on the record. In Option 2, while the

#	Step	Reported Event	Comments
		20180419T210000 cancelFlag: cancelTimestamp: quantity: 800 price: 10.00 side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: cancelFlag: cancelTimestamp: TIDType: SSN	cancelTimestamp: 20180419T210000 quantity: 500 price: 10.00 side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: TIDType: SSN *Broker 1 reports a* new ***Post-Trade Allocation*** ***event*** actionType: NEW type: MEPA allocationKeyDate: 20180419T000000 allocationID: A34567 symbol: XYZ eventTimestamp: 20180419T210000 cancelFlag: cancelTimestamp: quantity: 800 price: 10.00 side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: TIDType: SSN	*eventTimestamp* does not change on the COR record, the *cancelTimestamp* will reflect the time that the allocation was cancelled. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.

6.2.2. Allocation is Amended After Initial Booking Then Cancelled

This scenario illustrates the CAT reporting requirements when an Industry Member amends an allocation after it is initially booked to the customer's account, then later cancels the allocation. In this scenario, an Industry Member allocates 500 shares to a customer. After the initial booking of shares to the customer account, the Industry Member determines that the customer should have been allocated 800 shares. Later, the Industry Member makes the determination to cancel the allocation.

The reporting of this scenario depends on the Industry Member's allocation process and how the amendments are reflected in the firm's books and records. The cancellation of an allocation can be reported to CAT using the *cancelFlag* and *cancelTimestamp* in the Post-Trade Allocation event or the Amended Allocation event, as illustrated in Options 1 and 2 below. The *cancelTimestamp* must reflect the time that the allocation was cancelled. Refer to Section 4.14 of the CAT Reporting Technical Specifications for Industry Members for additional information.

The same guidance outlined in this scenario would apply if the allocation was not amended before it was cancelled.

Option 1:

The cancellation of the allocation is reported to CAT using the *cancelFlag* and *cancelTimestamp* in the Post-Trade Allocation event. In this example, since the Industry Member was unable to capture the *cancelFlag* and *cancelTimestamp* in its original submission, this information must be captured as a correction to the Post-Trade Allocation event.
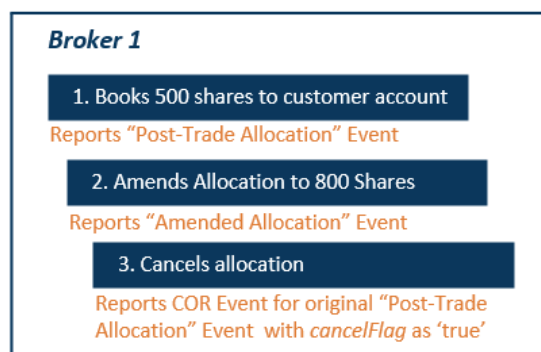
Broker 1
1. Books 500 shares to customer account
Reports "Post-Trade Allocation" Event
2. Amends Allocation to 800 Shares
Reports "Amended Allocation" Event
3. Cancels allocation
Reports COR Event for original "Post-Trade Allocation" Event with *cancelFlag* as 'true'

Industry Member Broker 1 is required to report:

- The booking of 500 shares into the customer's account (Post-Trade Allocation event)
- An amendment of the allocation to 800 shares (Amended Allocation event)
- The cancellation of the allocation (COR for the original Post-Trade Allocation event with the *cancelFlag* as 'true')

In accordance with FAQ U14, the Industry member is required to report changes to CAT reportable attributes of an allocation after the original booking of shares/contracts to CAT regardless if they occur

pre-settlement or post-settlement. The *cancelTimestamp* must reflect the time that the allocation was cancelled after it was previously amended. If the cancellation occurs after T+3 at 8AM, which is the deadline for timely corrections, Broker 1's COR will not be marked late if the *cancelTimestamp* is populated on the record.

#	Step	Reported Event	Comments
1	Broker 1 allocates 500 shares to the customer's account	*Broker 1 reports a **Post-Trade Allocation event*** actionType: NEW type: MEPA allocationKeyDate: 20180419T000000 allocationID: A12345 symbol: XYZ eventTimestamp: 20180419T200000 cancelFlag: cancelTimestamp: quantity: 500 price: 10.00 side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: TIDType: SSN	While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.
2	Broker 1 determines that the customer should have been allocated 800 shares	*Broker 1 reports an **Amended Allocation event*** actionType: NEW type: MEAA allocationKeyDate: 20180420T000000 allocationID: A34567 priorAllocationKeyDate: 20180419T000000 priorAllocationID: A12345 symbol: XYZ eventTimestamp: 20180420T200000 cancelFlag: cancelTimestamp: quantity: 800 price: 10.00	

#	Step	Reported Event	Comments
		side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: cancelFlag: cancelTimestamp: TIDType: SSN	
3	Broker 1 cancels the allocation	*Broker 1 reports a COR for its original **Post-Trade Allocation event** with the cancelFlag as 'true'* actionType: COR type: MEPA allocationKeyDate: 20180419T000000 allocationID: A12345 symbol: XYZ eventTimestamp: 20180419T200000 cancelFlag: true cancelTimestamp: 20180421T110000 quantity: 500 price: 10.00 side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: TIDType: SSN	The *eventTimestamp* in Broker 1's COR event must reflect the same timestamp as the original allocation. The *cancelTimestamp* must reflect the time that the allocation was cancelled after it was previously amended. If the cancellation occurs after T+3 at 8AM, which is the deadline for timely corrections, Broker 1's COR will not be marked late if the *cancelTimestamp* is populated on the record. While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.

Option 2:

The Industry Member reports the cancellation of the allocation to CAT using the *cancelFlag* and *cancelTimestamp* in the Amended Allocation event.

Reporting Option 2A ('NEW' Amended Allocation event with the *cancelFlag* as 'true')
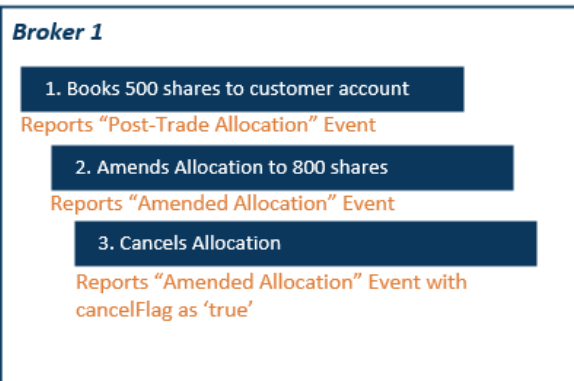
Industry Member Broker 1 is required to report:

- The booking of 500 shares into the customer's account (Post-Trade Allocation event)

- An amendment of the allocation to 800 shares (Amended Allocation event)

- The cancellation of the allocation (Amended Allocation event with the *cancelFlag* as 'true')

When reporting the cancellation of the allocation to CAT as described in Option 2A, the *eventTimestamp* must reflect the date/time that the allocation amendment was processed, which is the same time that the allocation was cancelled as reflected in the *cancelTimestamp* field.

Reporting Option 2B ('COR' of Amended Allocation event with the *cancelFlag* as 'true')
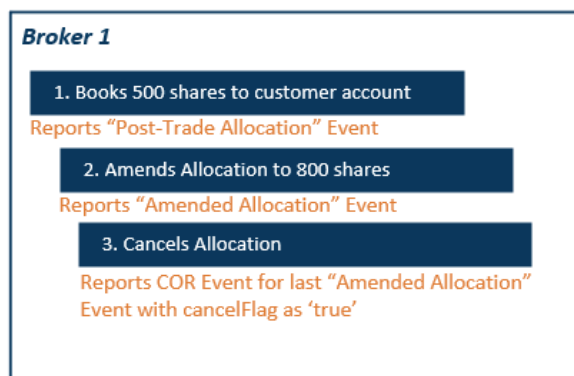
Industry Member Broker 1 is required to report:

- The booking of 500 shares into the customer's account (Post-Trade Allocation event)

- An amendment of the allocation to 800 shares (Amended Allocation event)

- The cancellation of the allocation ('COR' for the last Amended Allocation event with the *cancelFlag* as 'true')

In this example, since the Industry Member was unable to capture the *cancelFlag* and *cancelTimestamp* in its original submission, this information may be captured as a correction to the Amended Allocation event.

When reporting the cancellation of the allocation to CAT as described in Option 2B, the *eventTimestamp* must reflect the date/time of the original Amended Allocation event submission, and the *cancelTimestamp* must reflect the time that the allocation was cancelled after it was previously amended. If the cancellation occurs after T+3 at 8AM, which is the deadline for timely corrections, Broker 1's 'COR' event will not be marked late if the *cancelTimestamp* is populated on the record.

#	Step	Reported Event	Comments
1	Broker 1 allocates 500 shares to the customer's account	*Broker 1 reports a **Post-Trade Allocation event*** actionType: NEW type: MEPA allocationKeyDate: 20180419T000000 allocationID: A12345 symbol: XYZ eventTimestamp: 20180419T200000 cancelFlag: cancelTimestamp: quantity: 500 price: 10.00 side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: TIDType: SSN	While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.
2	Broker 1 determines that the customer should have been allocated 800 shares	*Broker 1 reports an **Amended Allocation event*** actionType: NEW type: MEAA allocationKeyDate: 20180420T000000 allocationID: A34567 priorAllocationKeyDate: 20180419T000000 priorAllocationID: A12345 symbol: XYZ eventTimestamp: 20180420T200000 quantity: 800 price: 10.00	

#	Step	Reported Event		Comments
		side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: cancelFlag: true cancelTimestamp: TIDType: SSN		
3	Broker 1 cancels the allocation	***Option 2A:*** *Broker 1 reports an* ***Amended Allocation event*** *with the cancelFlag as 'true'* actionType: NEW type: MEAA allocationKeyDate: 20180421T000000 allocationID: A67890 priorAllocationKeyDate: 20180420T000000 priorAllocationID: A34567 symbol: XYZ eventTimestamp: 20180421T110000 quantity: 800 price: 10.00 side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: cancelFlag: true cancelTimestamp: 20180421T110000 TIDType: SSN	***Option 2B:*** *Broker 1 reports a COR for* ***Amended Allocation event*** *with the cancelFlag as 'true'* actionType: COR type: MEAA allocationKeyDate: 20180420T000000 allocationID: A34567 priorAllocationKeyDate: 20180419T000000 priorAllocationID: A12345 symbol: XYZ eventTimestamp: 20180420T200000 quantity: 800 price: 10.00 side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: cancelFlag: true cancelTimestamp: 20180421T110000 TIDType: SSN	

6.2.3. Allocation is Amended then Reverted to the Original Terms and Conditions

This scenario illustrates the CAT reporting requirements when an Industry Member amends an allocation after it is initially booked to the customer's account, then later reverts the changes on the terms of the original booking. In this scenario, an Industry Member allocates 500 shares to a customer. After the initial booking of shares to the customer account, the Industry Member determines that the customer should have been allocated 800 shares. Later, the Industry Member later makes the determination that the allocation should not have been updated to 800 shares, and reverts to the original 500 share booking.
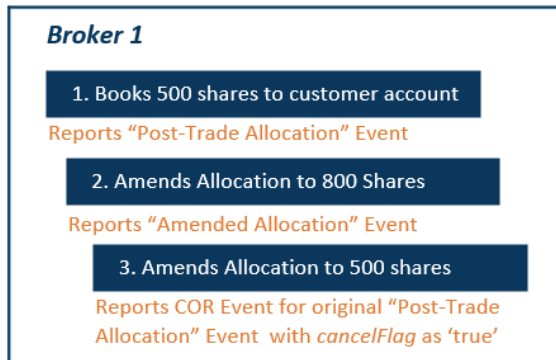
Industry Member Broker 1 is required to report:

- The booking of 500 shares into the customer's account (Post-Trade Allocation event)
- An amendment of the allocation to 800 shares (Amended Allocation event)
- An amendment of the allocation to 500 shares (Amended Allocation event)

Although the Industry Member reverted the changes that were made to the original booking, this must be captured as an Amended Allocation event reflecting the final details of the booking.

#	Step	Reported Event	Comments
1	Broker 1 allocates 500 shares to the customer's account	*Broker 1 reports a* **Post-Trade Allocation event** actionType: NEW type: MEPA allocationKeyDate: 20180419T000000 allocationID: A12345 symbol: XYZ eventTimestamp: 20180419T200000 cancelFlag: cancelTimestamp: quantity: 500 price: 10.00 side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417	While the *TIDType* field is optional in Phase 2d, this field may be required no earlier than July 11, 2022.

#	Step	Reported Event	Comments
		settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: TIDType: SSN	
2	Broker 1 determines that the customer should have been allocated 800 shares	*Broker 1 reports an **Amended Allocation event*** actionType: NEW type: MEAA allocationKeyDate: 20180420T000000 allocationID: A34567 priorAllocationKeyDate: 20180419T000000 priorAllocationID: A12345 symbol: XYZ eventTimestamp: 20180420T200000 cancelFlag: cancelTimestamp: quantity: 800 price: 10.00 side: B firmDesignatedID: CUS001 institutionFlag: false tradeDate: 20180417 settlementDate: 20180419 allocationType: CUS DVPCustodianID: correspondentCRD: newOrderFDID: CUS001 allocationInstructionTime: cancelFlag: cancelTimestamp: TIDType: SSN	
3	Broker 1 reverts the changes made to the allocation	*Broker 1 reports an **Amended Allocation event*** actionType: NEW type: MEAA allocationKeyDate: 20180421T000000 allocationID: A98765 priorAllocationKeyDate: 20180420T000000 priorAllocationID: A34567 symbol: XYZ eventTimestamp: 20180421T200000	Although Broker 1 reverted the changes made to the allocation, this must be reflected in CAT as an Amended Allocation event.

#	Step	Reported Event	Comments
		cancelFlag:	
		cancelTimestamp:	
		quantity: 500	
		price: 10.00	
		side: B	
		firmDesignatedID: CUS001	
		institutionFlag: false	
		tradeDate: 20180417	
		settlementDate: 20180419	
		allocationType: CUS	
		DVPCustodianID:	
		correspondentCRD:	
		newOrderFDID: CUS001	
		allocationInstructionTime:	
		cancelFlag:	
		cancelTimestamp:	
		TIDType: SSN	

7. 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.

7.1. Correcting Ingestion Errors

7.1.1. 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***	Rejected with Error Code 2001 - Missing or Invalid *accountHolderType*

#	Step	Reported Event	Comments
		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	
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.

7.1.2. 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.

Broker 1	CAT Processor
1. Receives the customer order	2. Rejects the Order from Broker 1
Reports "New Order" Event	Generates Ingestion Error Feedback
3. Resubmits the order	4. Accepts the repair
Reports "New Order" Event with actionType COR	Error Considered Repaired

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.

7.1.3. 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.

7.1.4. 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.

Note that in the example below, only a subset of fields relevant for corrections have been included.

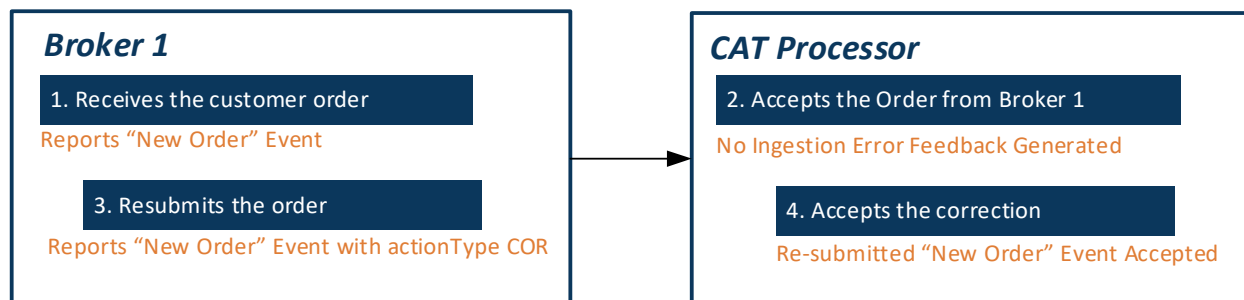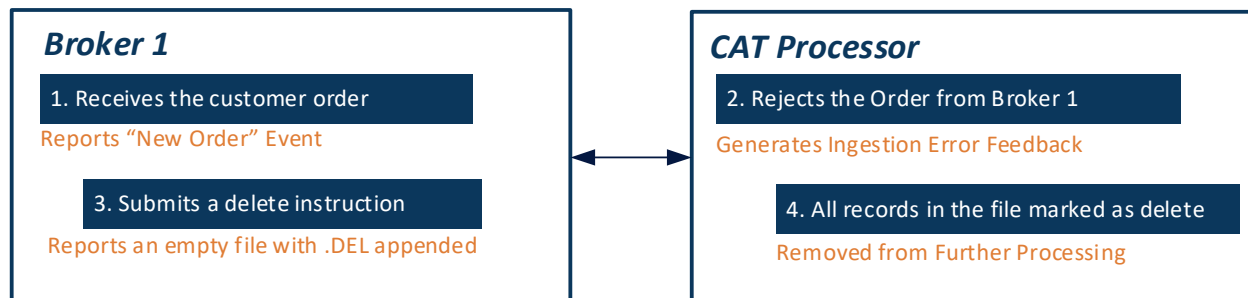| #	Step	Reported Event	Comments
1	Broker 1 submits an order	*Broker 1 reports a **New Order event*** actionType: NEW firmROEID: 20180501_M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180501T153035.234456 orderID: O12345 symbol: XYZ eventTimestamp: 20180501T153035.234456 accountHolderType: 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.

7.1.5. 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.

7.1.6. 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.

Broker 1

1. Receives the customer order
Reports "New Order" Event

3. Submits a delete record instruction
Reports an actionType of 'DEL'

CAT Processor

2. Accepts the Order from Broker 1
No Ingestion Error Feedback Generated

4. Record is marked as deleted
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: 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:	

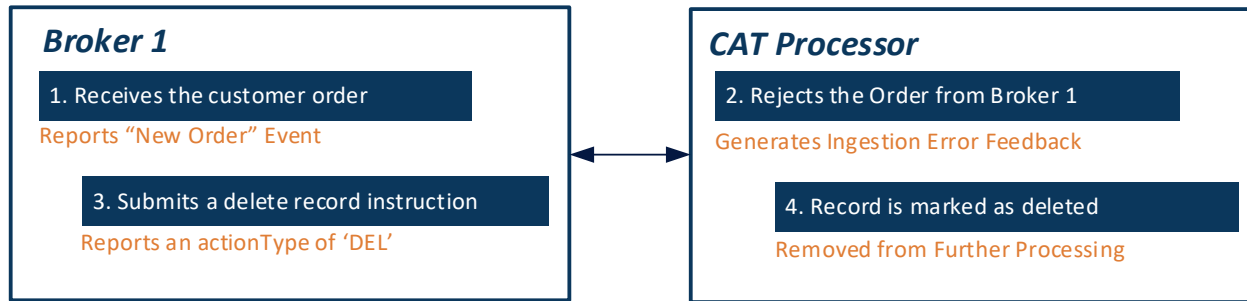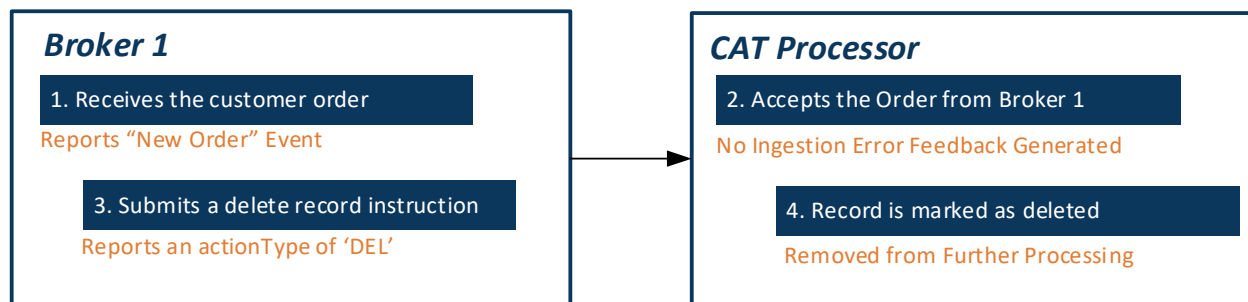| #	Step	Reported Event	Comments
		firmROEID: 20180501_M12360	
4	CAT Processor marks the record as deleted.		The original record will be considered as deleted. All associated errors will be considered as repaired.

7.1.7. 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.

7.2.   Correcting Linkage Discovery Errors

7.2.1. 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.

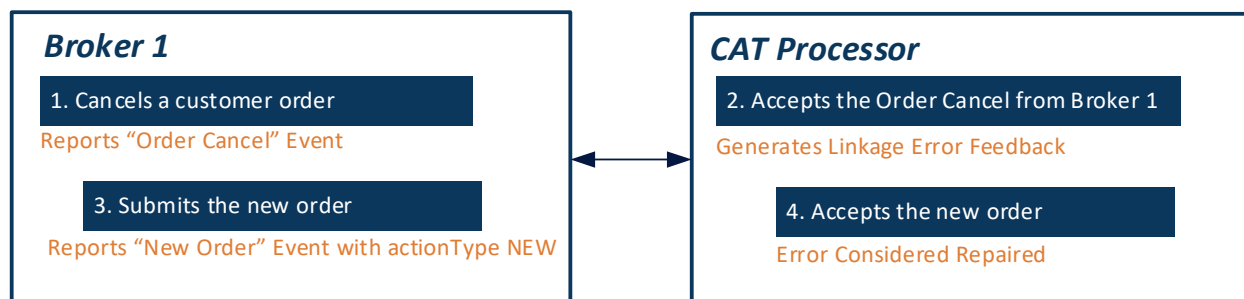| #	Step	Reported Event	Comments
1	Broker 1 reports an order cancel event	*Broker 1 reports an **Order Cancel event*** actionType: NEW firmROEID: 20180417_Q12360 type: MEOC CATReporterIMID:BRK1 orderKeyDate: 20180417T000000 eventTimestamp: 20180417T143035.323556 symbol: XYZ orderID: Z23456 cancelQty: 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.

7.2.2. 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, 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.

Broker 1	CAT Processor
1. Routes an order to Broker 2	**2. Accepts the Order Route from Broker 1**
Reports "Order Route" Event	Generates Linkage Error Feedback
3. Resubmits the order	**4. Accepts the repair**
Reports "Order Route" Event with actionType RPR	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 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: 123:FRMA destination: 456: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: 123:FRMA destination: 456:FRMB orderID: O23456 routedOrderID: AO222	Linkage Error Code 8003 - Matching *routedOrderID* cannot be found.

#	Step	Reported Event	Comments
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: 123:FRMB senderIMID: 456: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: 123:FRMA destination: 456: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.

7.2.3. 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, the following events occur:

- Order Route event submitted by Broker 1 is unlinked to Order Accepted event submitted by Broker 2 because a matching *routedOrderID* cannot be found

- The CAT Processor returns unlinked error feedback to the reporting parties and unlinked "named" error feedback to the "named" parties

- Broker 1 corrects the error in the *routedOrderID* and resubmits to CAT

- The CAT Processor links the Order Route event resubmitted by Broker 1 to the Order Accepted event reported by Broker 2 and resolves the errors

Broker 1

1. Routes to Broker 2
Reports "Order Route" Event with routedOrderID "AO222"

Broker 2

2. Accepts order from Broker 1
Reports "Order Accepted" Event with routedOrderID "XP765"

CAT Processor

3. Accepts Order Route event from Broker 1 and attempts linkage

4. Returns Linkage Error 8003 to Broker 1

5. Returns "Named" Linkage Error 8004 to Broker 2

CAT Processor

6. Accepts Order Accepted event from Broker 2 and attempts linkage

8. Returns "Named" Linkage Error 9004 to Broker 1

7. Returns Linkage Error 9003 to Broker 2

9. Resubmits route to Broker 2 with corrected ROID
Reports "Order Route" Event with actionType "RPR"

CAT Processor

10. Accepts Corrected Order Route event from Broker 1 and links to Order Accepted event from Broker 2

11. Resolves Broker 1's 8003 Error

12. Resolves Broker 2's "Named" 8004 Error

13. Resolves Broker 1's "Named" 9004 error

14. Resolves Broker 2's 9003 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 route to Broker 2	*Broker 1 reports an **Order Route** event* actionType: NEW firmROEID: 20180417_Z12360 type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.234556 senderIMID: 123:FRMA destination: 456:FRMB	

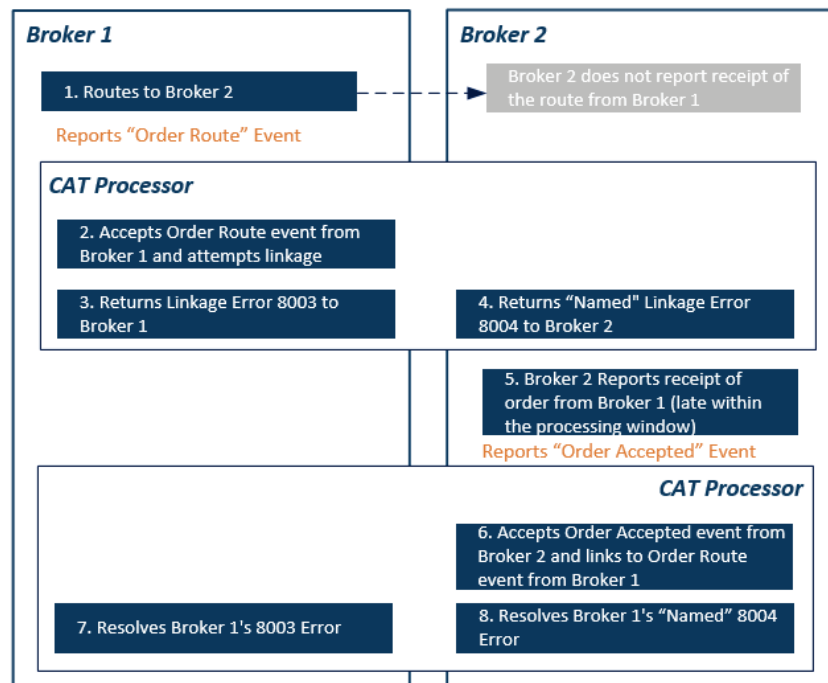| #	Step	Reported Event	Comments
		routedOrderID: AO222	
2	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** actionType: NEW firmROEID: 20180417_X98735 type: MEOA orderKeyDate: 20180417T000000 orderID: O6789 symbol: XYZ eventTimestamp: 20180417T153035.234556 receiverIMID: 456:FRMB senderIMID: 123:FRMA routedOrderID: XP756	
3	Broker 1 receives unlinked 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: 123:FRMA destination: 456:FRMB orderID: O23456 routedOrderID: AO222	Linkage Error Code 8003 - Matching *routedOrderID* cannot be found.
4	Broker 2 receives "named" unlinked feedback from the CAT Processor	*Broker 2 receives feedback as Named on the **Order Route event*** errorCode: 8004 errorType: ERRIM firmROEID: 20180417_Z12360 type: MEOR symbol: XYZ eventTimestamp: 20180417T153035.234556 senderIMID: 123:FRMA destination: 456:FRMB routedOrderID: AO222	Linkage Error Code 8004 - Named - Matching *routedOrderID* cannot be found.
5	Broker 2 receives unlinked feedback from the CAT processor	*Broker 2 receives feedback on the **Order Accepted event*** errorCode: 9003 actionType: RPR	Linkage Error Code 9003 – Matching *routedOrderID* cannot be found.

#	Step	Reported Event	Comments
		errorROEID: 98765987 firmROEID: 20180417_X98735 type: MEOA orderKeyDate: 20180417T000000 orderID: O6789 symbol: XYZ eventTimestamp: 20180417T153035.234556 receiverIMID: 456:FRMB senderIMID: 123:FRMA routedOrderID: XP756	
6	Broker 1 receives "named" feedback from the CAT Processor	*Broker 1 receives feedback as Named on the* **Order Accept** *event* errorCode: 9004 errorType: ERRIM firmROEID:20180417_Z12322 symbol: XYZ eventTimestamp: 20180417T153035.234556 receiverIMID: 456:FRMB senderIMID: 123:FRMA routedOrderID: XP756	Linkage Error Code 9004- Named- Matching *routedOrderID* cannot be found.
7	Broker 1 repairs the unlinked Order Route event 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 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.234556 senderIMID: 123:FRMA destination: 456:FRMB routedOrderID: XP756	The firm may also use *actionType* of 'COR' when re-submitting the Order Route event.
8	CAT Processor accepts the unlink repair and resolves linkage errors		During processing, CAT will make the linkage and the 8003, 8004, 9003 and 9004 errors will be considered repaired.

7.2.4. Correcting an Interfirm Linkage Error by Submitting the Missing Event

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 by reporting the missing event.

For this scenario, the following events occur:

- Order Route event submitted by Broker 1 is unlinked, as no Order Accepted event was submitted by Broker 2
- The CAT Processor returns unlinked error feedback to Broker 1 and "named" feedback to Broker 2
- Broker 2 submits the related Order Accepted event to CAT
- The CAT Processor links the Order Route event submitted by Broker 1 to the Order Accepted event reported by Broker 2 and resolves the errors

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 route to Broker 2	*Broker 1 reports an **Order Route event*** actionType: NEW firmROEID: 20180417_Z12360 type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.234556 senderIMID: 123:FRMA destination: 456:FRMB routedOrderID: AO222	

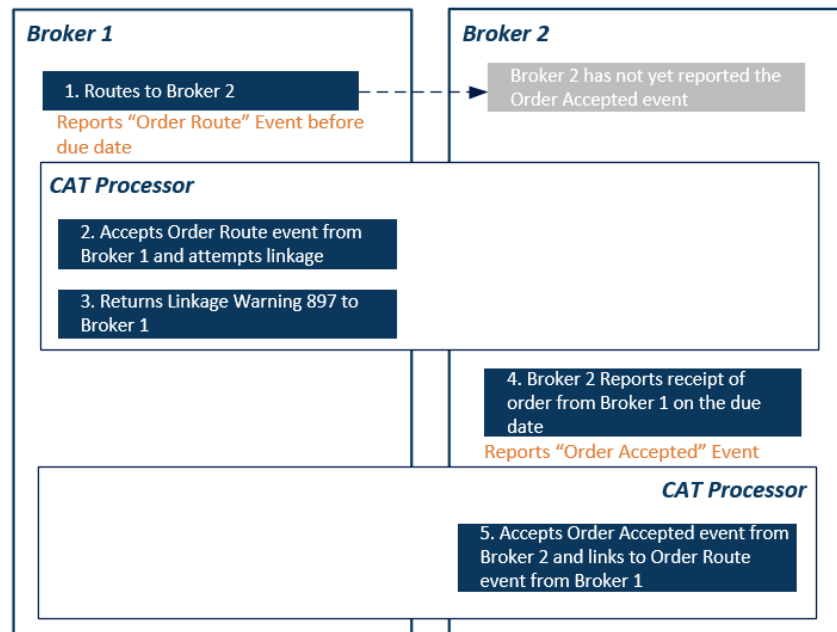| #	Step	Reported Event	Comments
2	Broker 1 receives unlinked feedback from the CAT Processor	*Broker 1 receives feedback on the **Order Route event*** errorCode: 8003 actionType: RPR errorROEID: 123451234 firmROEID: 20180417__Z12360 type: MEOR orderKeyDate: 20180417T000000 eventTimestamp: 20180417T153035.234556 symbol: XYZ senderIMID: 123:FRMA destination: 456:FRMB orderID: O23456 routedOrderID: AO222	Linkage Error Code 8003 - Matching *routedOrderID* cannot be found.
3	Broker 2 receives "named" unlinked feedback from the CAT Processor	*Broker 2 receives feedback as Named on the **Order Route event*** errorCode: 8004 errorType: ERRIM firmROEID: 20180417__Z12360 type: MEOR symbol: XYZ eventTimestamp: 20180417T153035.234556 senderIMID: 123:FRMA destination: 456:FRMB routedOrderID: AO222	Linkage Error Code 8004 - Named - Matching *routedOrderID* cannot be found.
4	Broker 2 reports the Order Accepted event (late within the processing window)	*Broker 2 receives feedback on the **Order Accepted event*** actionType: NEW firmROEID: 20180417_X98735 type: MEOA orderKeyDate: 20180417T000000 orderID: O6789 symbol: XYZ eventTimestamp: 20180417T153035.234556 receiverIMID: 456:FRMB senderIMID: 123:FRMA routedOrderID: AO222	
5	CAT Processor links the record from Broker 2 and repair and resolves linkage errors		During processing, CAT will make the linkage and the 8003 and 8004 errors will be considered repaired.

7.2.5. Interfirm Linkage Warning for a Record Reported Early to CAT

This scenario illustrates the feedback provided by the CAT Processor and the follow-up reporting requirements to CAT for an Industry Member that reports a record to CAT prior to the due date.

For this scenario, the following events occur:

- Order Route event submitted by Broker 1 is reported prior to the due date and is unlinked, as the Order Accepted event has not yet been submitted by Broker 2
- The CAT Processor returns a warning to Broker 1 that is not repairable
- Broker 2 submits the related Order Accepted event to CAT on the due date
- The CAT Processor links the Order Route event submitted by Broker 1 to the Order Accepted event reported by Broker 2

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 route to Broker 2 before the due date	*Broker 1 reports an **Order Route** event* actionType: NEW firmROEID: 20180417_Z12360 type: MEOR orderKeyDate: 20180417T000000 orderID: O23456 symbol: XYZ eventTimestamp: 20180417T153035.234556	

#	Step	Reported Event	Comments
		senderIMID: 123:FRMA destination: 456:FRMB routedOrderID: AO222	
2	Broker 1 receives unlinked warning from the CAT Processor	*Broker 1 receives feedback on the **Order Route event*** errorCode: 897 actionType: RPR errorROEID: 123451234 firmROEID: 20180417_Z12360 type: MEOR orderKeyDate: 20180417T000000 eventTimestamp: 20180417T153035.234556 symbol: XYZ senderIMID: 123:FRMA destination: 456:FRMB orderID: O23456 routedOrderID: AO222	The CAT Processor is unable to identify a matching ROID for the Event Date. Linkage Error Code 897 - Early reported event
3	Broker 2 reports the Order Accepted event on the due date	*Broker 2 reports an **Order Accepted event*** actionType: NEW firmROEID: 20180417_X98735 type: MEOA orderKeyDate: 20180417T000000 orderID: O6789 symbol: XYZ eventTimestamp: 20180417T153035.234556 receiverIMID: 456:FRMB senderIMID: 123:FRMA routedOrderID: AO222	
4	CAT Processor links the record from Broker 2 to the record from Broker 1		No further action is required by Broker 1, since the 897 Warning is not repairable

8. Floor Broker Scenarios

8.1. NYSE Floor Broker Scenarios

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

8.1.1. 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: 123:FRMA destination: 123: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*

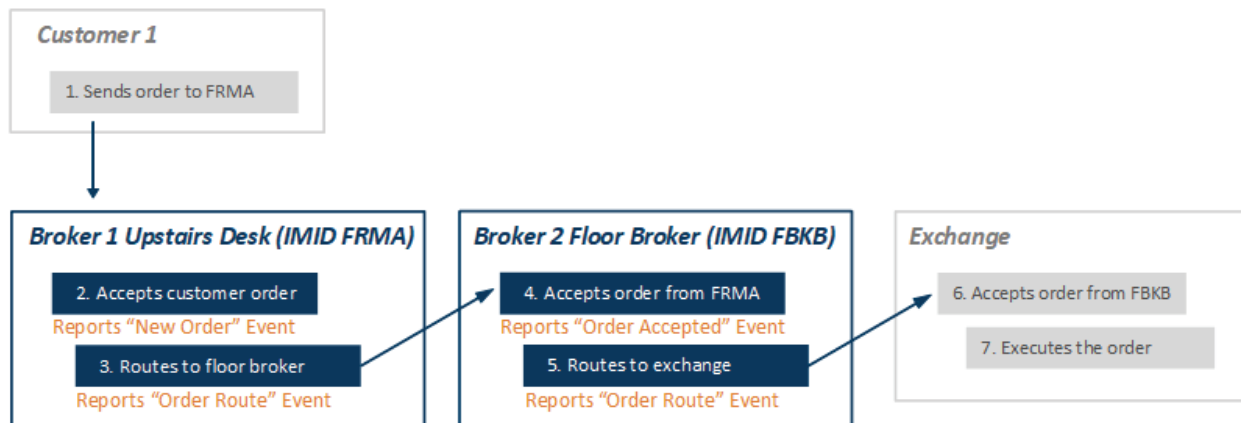| #	Step	Reported Event	Comments
	order from FRMA	*(IMID=FBKA) reports an **Order Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.534556 manualFlag: false receiverIMID: 123:F1 senderIMID: 123:FRMA senderType: F routedOrderID: XYZO555 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: 123: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***	

8.1.2. 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: 123:FRMA destination: 456: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 accepts the order from	*Broker 2's Floor Broker (IMID=FBKB) reports an **Order***	In this scenario, the *receiverIMID* represents the entering firm

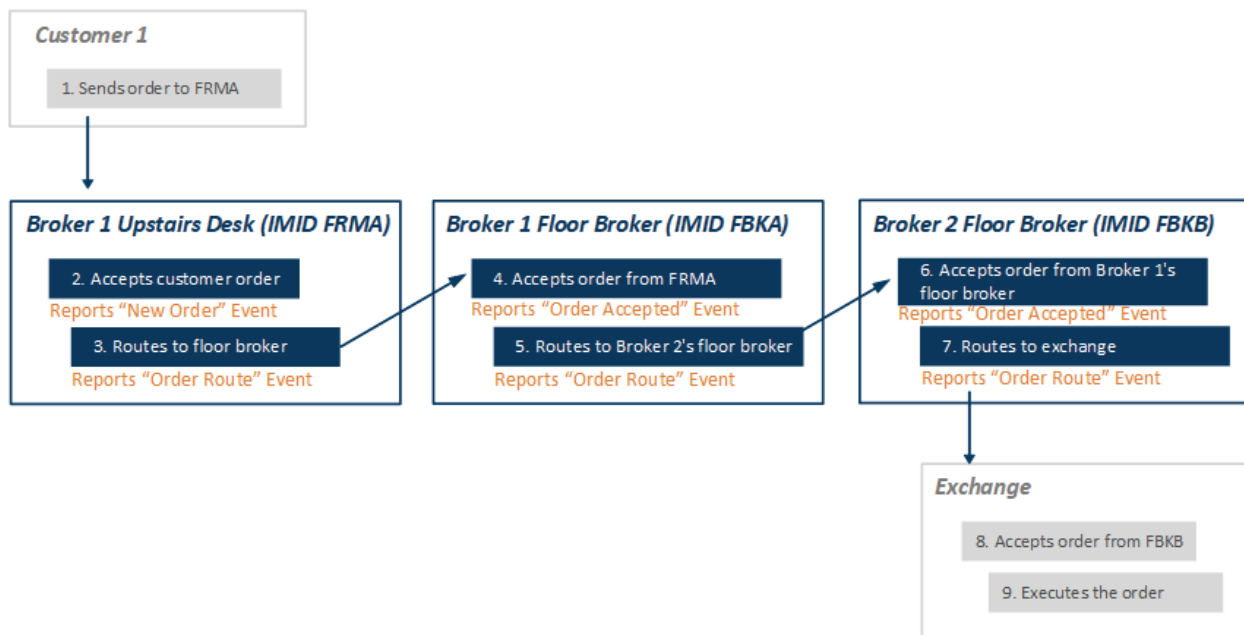| #	Step	Reported Event	Comments
	FRMA	***Accepted event*** type: MEOA orderKeyDate: 20180417T000000 orderID: O34567 symbol: XYZ eventTimestamp: 20180417T153035.534556 manualFlag: false receiverIMID: 456:F2 senderIMID: 123:FRMA senderType: F routedOrderID: XYZO555 affiliateFlag: true deptType: A side: B price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG isoInd: NA custDspIntrFlag: false	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: 456: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:	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order.

#	Step	Reported Event	Comments
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***	

8.1.3. 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: 123:FRMA destination: 123: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	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: 123:F1 senderIMID: 123: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 senderIMID: 123:F1 destination: 456:BDG3456	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
		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: 456:BDG3456 senderIMID: 123: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 symbol: XYZ eventTimestamp:	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order.

#	Step	Reported Event	Comments
		20180417T153036.434556 manualFlag: false senderIMID: 456: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***	

8.1.4. 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.
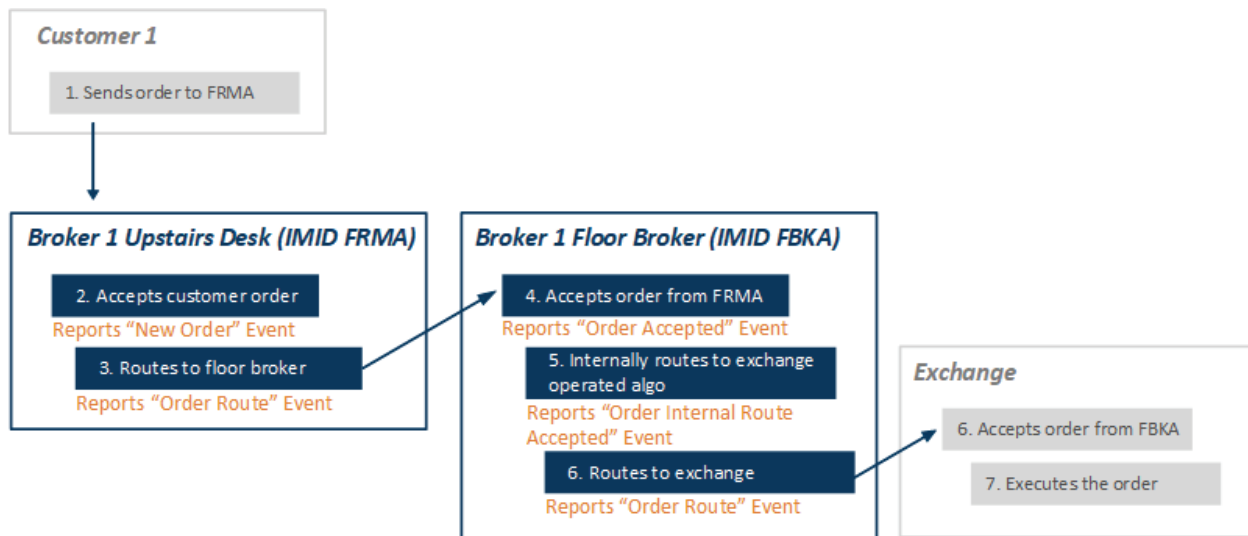
Industry Member Broker 1's upstairs desk (FRMA) is required to report:

- 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: 123:FRMA destination: 123: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: 123:F1 senderIMID: 123: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. A *handlingInstructions* value of FBA is required.

#	Step	Reported Event	Comments
		20180417T153036.534556 manualFlag: false senderIMID: 123: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: FBA	
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***	

8.1.5. 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.
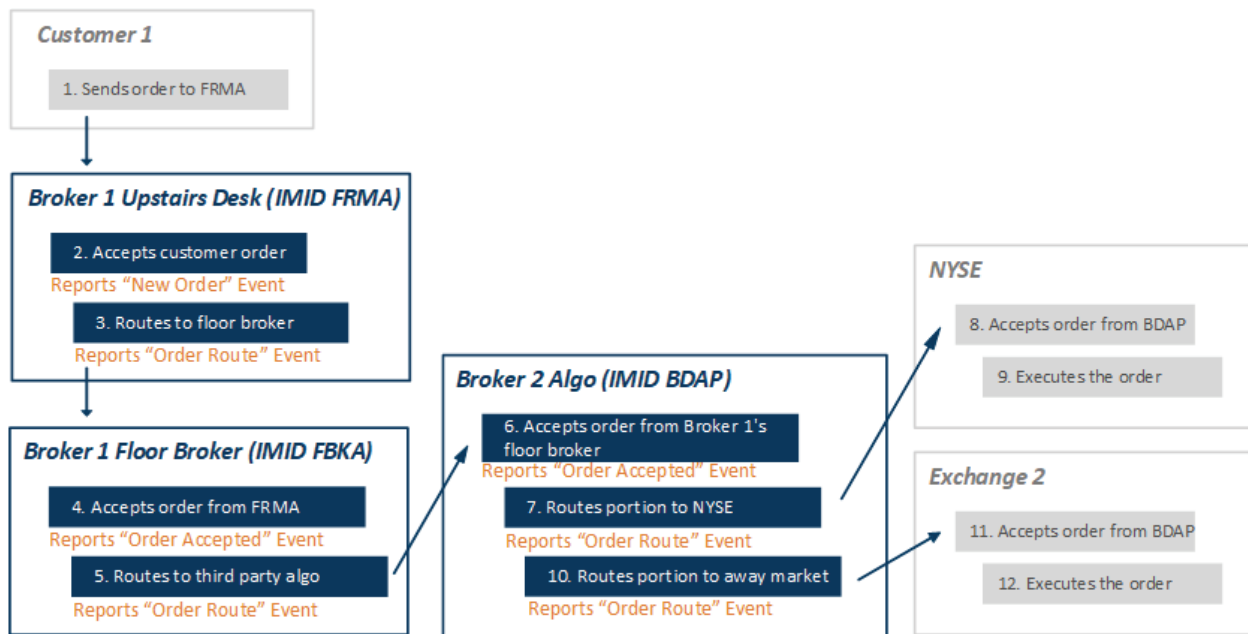
Industry Member Broker 1's upstairs desk (FRMA) is required to report:

- 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 orderKeyDate: 20180417T000000	

#	Step	Reported Event	Comments
		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: 123:FRMA destination: 123: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: 123:F1 senderIMID: 123: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: 123:BDG1234 destination: 456: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: FBA	In this scenario, the *senderIMID* represents the badge number of the floor broker routing the order. A *handlingInstructions* value of FBA is required.

#	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: 456:BDAP senderIMID: 123: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: 456:BDAP destination: NYSE destinationType: E routedOrderID: XYZO570 session: Es6:AA side: B price: 10.00 quantity: 3000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG	A *handlingInstructions* value of FBA is required.

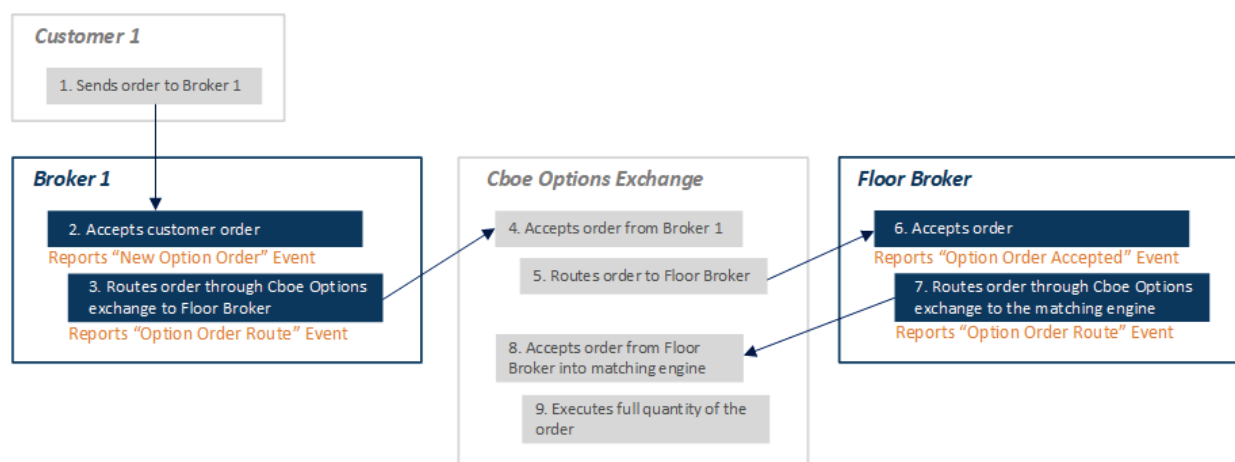| #	Step	Reported Event	Comments
		affiliateFlag: false isoInd: NA handlingInstructions: FBA	
8	NYSE accepts the order from the floor broker	*NYSE reports a Participant **Order Accepted event***	
9	NYSE executes the order	*NYSE reports a Participant **Trade event***	
10	BDAP partially routes the order to an away market	*BDAP reports an **Order Route event*** type: MEOR orderKeyDate: 20180417T000000 orderID: O56789 symbol: XYZ eventTimestamp: 20180417T153036.434556 manualFlag: false senderIMID: 456: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: FBA	A *handlingInstructions* value of FBA is required.
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***	

8.2. Cboe Floor Trader Scenarios

This section illustrates the CAT reporting requirements for Cboe Floor Brokers and Cboe Floor Market Makers.

8.2.1. Cboe Options Floor Broker Receives and Routes Order to Cboe Options Matching Engine for Further Handling and Execution

This scenario illustrates the CAT 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)
  The MOOR event must 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))

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' on the route to the exchange matching engine.

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: 20210222T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133031.1234 deptType: A side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20210222 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: 20210222T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133031.1684 senderIMID: 123:BRKR01 destination: CBOE destinationType: E routedOrderID: RT555 session: ABCD1234 side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: DIR|FB	Broker 1 is 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.

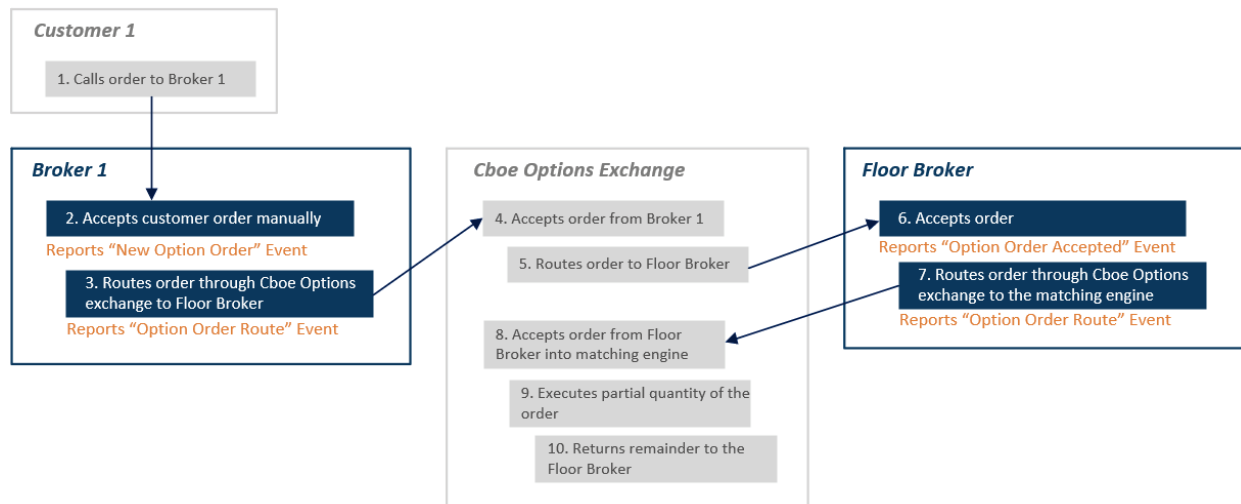| #	Step	Reported Event	Comments
		exchOriginCode: C affiliateFlag: false openCloseIndicator: Open	
4	Cboe Options exchange accepts the order from Broker 1	*Exchange reports a Participant **Simple Option Order Accepted event***	
5	Cboe Options exchange routes the order to Floor Broker	*Exchange reports 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: 20210222T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133032.1684 receiverIMID: 456:FBRKR senderIMID: CBOE senderType: E routedOrderID: RT0789 deptType: T side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20210222 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 "book" button)	*Floor Broker reports an **Option Order Route event*** type: MOOR orderKeyDate: 20210222T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133033.4684 senderIMID: 456:FBRKR destination: CBOE destinationType: E routedOrderID: RT4210 session: EFGH4567	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
		side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20210222 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*	

8.2.2. 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 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 manual receipt of the order from the customer (New Option Order event)

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

  The MOOR event must 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	*Broker 1 reports a **New Option Order event*** type: MONO orderKeyDate: 20210222T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133028 manualFlag: true electronicTimestamp: 20210222T133031.1684	Broker 1 is required to report the time the order was received manually and the time the order was systematized.

#	Step	Reported Event	Comments
		deptType: A side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: firmDesignatedID: CUS98765 accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	
3	Broker 1 systematizes the order in its EMS and routes the order through the Cboe Options exchange to Floor Broker	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20210222T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133031.1684 senderIMID: 123:BRKR01 destination: CBOE destinationType: E routedOrderID: RT555 session: ABCD1234 side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: DIR|FB exchOriginCode: C affiliateFlag: false openCloseIndicator: Open	Broker 1 is 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 the Floor Broker	*Exchange reports a Participant **Option Route event***	
6	Floor Broker accepts the order from the Cboe	*Floor Broker reports an **Option Order Accepted event***	

#	Step	Reported Event	Comments
	Options exchange	type: MOOA orderKeyDate: 20210222T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133032.1684 receiverIMID: 456:FBRKR senderIMID: CBOE senderType: E routedOrderID: RT0789 deptType: T side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG affiliateFlag: false openCloseIndicator: Open	
7	Floor Broker routes the order through the Cboe Options exchange to 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)	*Floor Broker reports an Option Order Route event* type: MOOR orderKeyDate: 20210222T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133032.4684 senderIMID: 456:FBRKR destination: CBOE destinationType: E routedOrderID: RT3210 session: EFGH4567 side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: IOR tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open	The floor broker is required to report a *timeInForce* value of 'IOR' indicating that the order routed to the Cboe Options exchange as immediate or return.
8	Cboe Options exchange accepts the order from	*Exchange reports a Participant Order from Floor Broker event*	

#	Step	Reported Event	Comments
	the floor broker into the exchange matching engine		
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***	

8.2.3. Industry Member Cancels a Route to a Cboe Options Floor Broker

This scenario illustrates the CAT 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 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.

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.
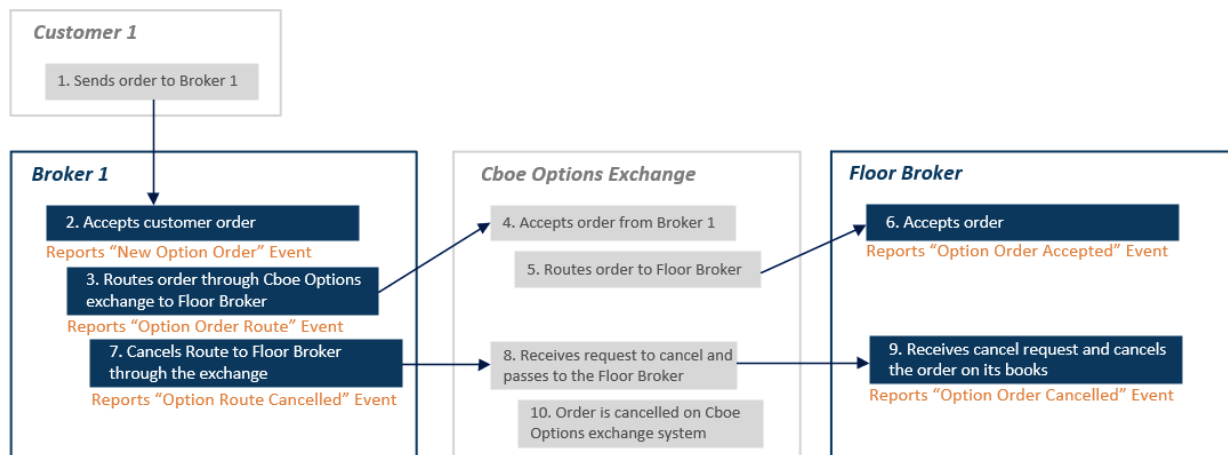
Industry Member Broker 1 is required to report:

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

The MOOR event must also include *handlingInstructions* values 'DIR' (Directed Orders) and 'FB' (Cboe Options Floor Broker) to denote the route to Floor Broker.

- The cancellation of the Route to the Floor Broker (Option Route Cancelled event)

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: 20210222T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133031.1234 deptType: A side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20210222 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 Floor Broker	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20210222T000000 orderID: O54321 optionID: ABCD 190215C00062500	Broker 1 is 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.

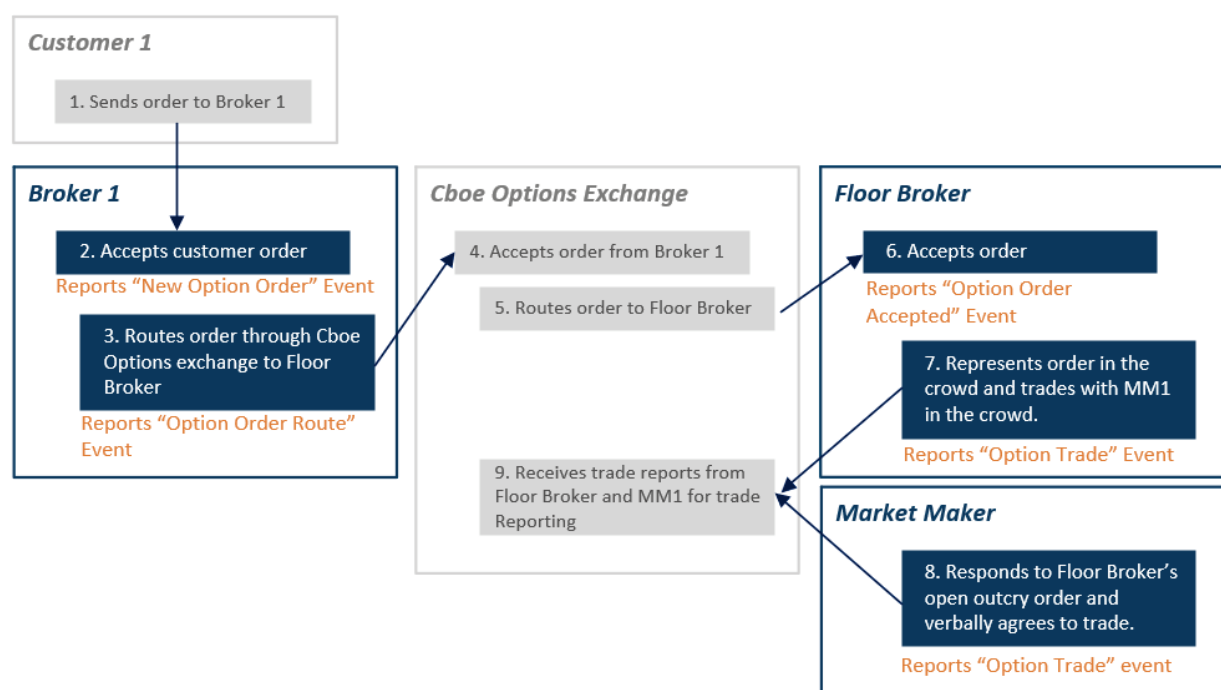| #	Step	Reported Event	Comments
		eventTimestamp: 20210222T133031.1684 senderIMID: 123:BRKR01 destination: CBOE destinationType: E routedOrderID: RT555 session: ABCD1234 side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: DIR|FB exchOriginCode: 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: 20210222T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133032.1684 receiverIMID: 456:FBRKR senderIMID: CBOE senderType: E routedOrderID: RT0789 deptType: T side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG affiliateFlag: false openCloseIndicator: Open	

#	Step	Reported Event	Comments
7	Broker 1 cancels the route to Floor Broker through the exchange	*Broker 1 reports an **Option Route Cancelled event*** type: MOCR orderKeyDate: 20210222T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133038.1684 senderIMID: 123:BRKR01 destination: CBOE destinationType: E routedOrderID: RT555 session: ABCD1234	
8	Cboe Options exchange receives Broker 1's request to cancel the order and passes the request to 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: 20210222T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133038.4684 manualFlag: false cancelQty: 10 leavesQty: 0 initiator: C requestTimestamp: 20210222T133038.4684	In this example, the *requestTimestamp* is the same as the *eventTimestamp*. The Floor Broker may alternatively choose to report a separate Option Order Cancel Request event to capture the request time.
10	Order is cancelled on Cboe Options exchange system	*Exchange reports a Participant **Option Order Cancelled event***	

8.2.4. Cboe Options Floor Broker Manually Trades an Options Order Against a Market Maker in Open Outcry

This scenario illustrates the CAT 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 asks the trading crowd for a market

and Market Maker 1 provides verbal quotes, then Floor Broker verbally represents the order to the crowd in open outcry and trades the order against Market Maker 1's verbal quote (i.e., the order is manually executed by 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)
  The MOOR event must 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 trade executed manually on the exchange floor in Open Outcry (Option Trade event)

Note that Floor Broker's request for market from the trading crowd is not reportable to CAT (requests for quotes and indications of interest are not reportable to CAT, refer to CAT FAQ B3 for more information). Note also that Floor Broker's representation of the order to the crowd is not currently reportable to CAT (floor broker verbal announcements of firm bids and offers on an exchange trading floor that are

otherwise reported as systematized orders are subject to the _SEC's November 12, 2020 order_ granting a temporary conditional exemption relating to the reporting of certain on and off floor activities until July 31, 2023).

Industry Member Market Maker 1 is required to report:

- The trade executed manually on the exchange floor in Open Outcry (Option Trade event)

Note that Market Maker 1's verbal quote is not currently reportable to CAT (market maker verbal announcements of firm quotes on an exchange trading floor are subject to the _SEC's November 12, 2020 order_ granting a temporary conditional exemption relating to the reporting of certain on and off floor activities until July 31, 2023).

Both Floor Broker and Market Maker 1 are required to report a MOOT event to CAT reflecting their individual sides of the execution. Floor Broker must capture the _orderID_ in the _sellDetails_ of its MOOT event in order to link to its related MOOA event. Since Market Maker 1 was not required to report an MOOA event, Market Maker 1 must populate the _firmDesignatedID_ field in the _buyDetails_ of its MOOT event reflecting the FDID of the account associated with the execution.

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: 20210222T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133031.1234 deptType: A side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: firmDesignatedID: CUS98765	

#	Step	Reported Event	Comments
		accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	
3	Broker 1 directs the order through the Cboe Options exchange to Floor Broker	*Broker 1 reports an **Option Order Route event*** type: MOOR orderKeyDate: 20210222T000000 orderID: O54321 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133031.1684 senderIMID: 123:BRKR01 destination: CBOE destinationType: E routedOrderID: RT555 session: ABCD1234 side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: DIR|FB exchOriginCode: C affiliateFlag: false openCloseIndicator: Open	Broker 1 is 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***	
6	Floor Broker accepts the order from the Cboe Options exchange	*Floor Broker reports an **Option Order Accepted event*** type: MOOA orderKeyDate: 20210222T000000 orderID: O45678 optionID: ABCD 190215C00062500 eventTimestamp: 20210222T133032.1684 receiverIMID: 456:FBRKR senderIMID: CBOE senderType: E	

| #	Step	Reported Event	Comments
		routedOrderID: RT0789 deptType: T side: S price: 6.60 quantity: 30 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG affiliateFlag: false openCloseIndicator: Open	
7	Floor Broker asks the trading crowd for a market and Market Maker 1 provides a verbal quote, then Floor Broker verbally represents the order in the crowd and trades it in the crowd with Market Maker 1.	*Floor Broker reports an **Option Trade event*** type: MOOT tradeKeyDate: 20210222T000000 tradeID: T12345 optionID: XYZ 210618C00022500 eventTimestamp: 20210222T133108 manualFlag: true electronicTimestamp: cancelFlag: false quantity: 30 price: 6.60 capacity: A tapeTradeID: S999999 sideDetailsInd: SELL sellDetails: orderKeyDate: 20210222T000000 orderID: O45678 side: S firmDesignatedID: accountHolderType: marketCenterID: CBOE multiLegInd: false	Floor Broker reports a single-sided MOOT event, representing its side of the trade, with the *orderID* populated. The *tapeTradeID* field is used to link to the Trade event reported to CAT by the Exchange. Note that the request for quote by Floor Broker is not reportable to CAT, and the verbal quote by Market Maker 1, as well as the representation of the order by Floor Broker, are subject to a temporary exemption from reporting to CAT. Please also note that use of the 'Represent' button on Floor Broker's PAR Workstation is not a CAT reportable event for Industry Members.
8	Market Maker verbally trades in the crowd with Floor Broker.	*Market Maker 1 reports an **Option Trade event*** type: MOOT tradeKeyDate: 20210426T000000 tradeID: 99999 optionID: XYZ 210618C00022500 eventTimestamp: 20210426T133108 manualFlag: true electronicTimestamp:	Market Maker 1 reports a single-sided MOOT event, representing its side of the trade, with the *firmDesignatedID* and *accountHolderType* populated. The *tapeTradeID* field is used to link to the Trade event reported to CAT by the Exchange. Note that the *eventTimestamp* must correspond with trade times recorded in Cboe's Market Maker Trade Notifications or Floor Trade Confirmation/Add messages, as applicable.

#	Step	Reported Event	Comments
		cancelFlag: false quantity: 30 price: 6.60 capacity: P tapeTradeID: B999999 sideDetailsInd: BUY buyDetails: orderKeyDate: orderID: side: B firmDesignatedID: MM12345 accountHolderType: O marketCenterID: CBOE multiLegInd: false	
9	Cboe Options exchange receives trade reports from Floor Broker and Market Maker 1 for trade reporting	*Exchange reports a Participant* **Simple Option Trade event**	

8.2.5. Cboe Options Floor Broker Manually Trades the Options Leg of a Complex Order Against a Cboe Options Market Maker Verbal Quote in Open Outcry then the Floor Broker and Market Maker Each Route their Side of the Equity Leg to another Industry Member

This scenario illustrates the CAT 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 asks the trading crowd for a market and Market Maker 1 provides a verbal quote, then Floor Broker verbally represents the complex order to the crowd in open outcry and trades the complex order with Market Maker 1 at a net price, with the execution of the options legs on the Cboe Options exchange at a given price being contingent on the execution of the equity leg on another trading venue at a given price. The execution of the options leg is then communicated to the exchange for trade reporting. In addition, 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.

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.
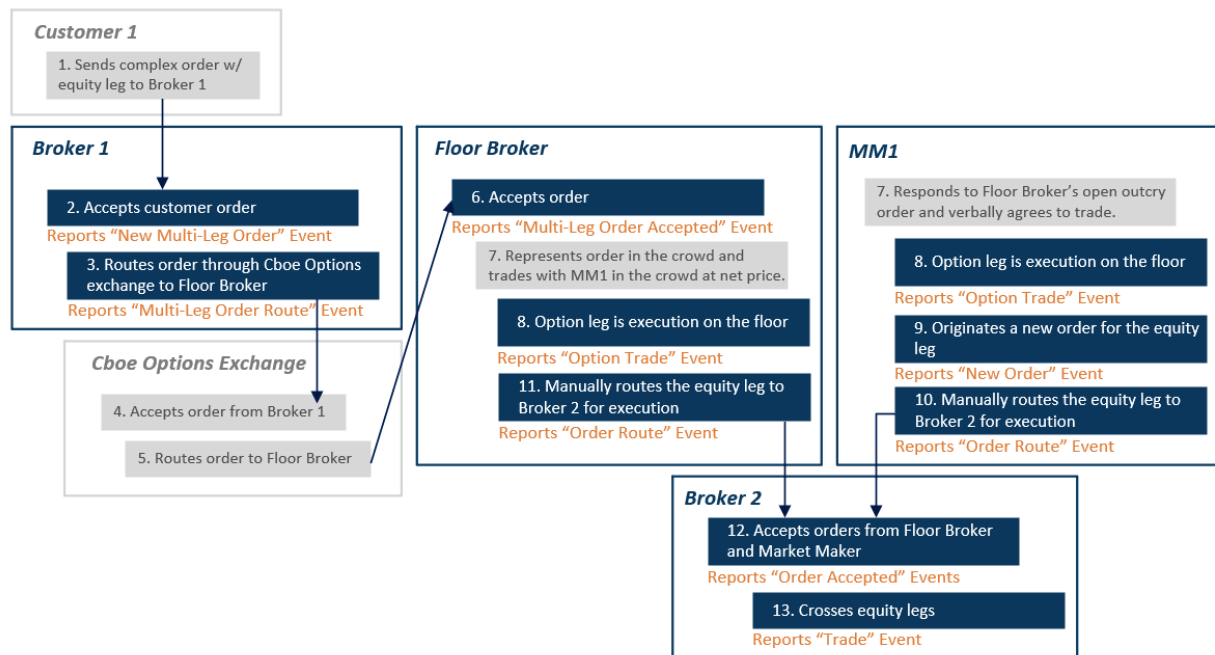
Industry Member Broker 1 is required to report:

- The receipt of the complex order from the customer (New Multi-Leg Order event)
- The route of the complex order to the exchange (Multi-Leg Order Route event with *handlingInstructions* '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 complex order from the exchange (Multi-Leg Order Accepted event)
- The trade of the options leg executed manually on the exchange floor in Open Outcry (Option Trade event)
- The route of the equity leg buy order to Broker 2 (Order Route event with *handlingInstructions* 'OPT')

Note that Floor Broker's request for market from the trading crowd is not reportable to CAT (requests for quotes and indications of interest are not reportable to CAT). Note also that Floor Broker's representation of the order to the crowd is not currently reportable to CAT (floor broker verbal announcements of firm bids and offers on an exchange trading floor that are otherwise reported as systematized orders are subject to the *SEC's November 12, 2020 order* granting a temporary conditional exemption relating to the reporting of certain on and off floor activities until July 31, 2023).

Industry Member Market Maker 1 is required to report:

- The trade of the options leg executed manually on the exchange floor in Open Outcry (Option Trade event)
- The origination of the equity leg order (New Order event with *handlingInstructions* 'OPT')
- The route of the equity leg sell order to Broker 2 (Order Route event with *handlingInstructions* 'OPT')

Note that Market Maker 1's verbal quote is not currently reportable to CAT (market maker verbal announcements of firm quotes on an exchange trading floor are subject to the SEC's November 12, 2020 order granting a temporary conditional exemption relating to the reporting of certain on and off floor activities until July 31, 2023). However, the Market Maker must report the origination of the equity leg order that is routed to Broker 2.

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)

Both Floor Broker and Market Maker 1 are required to report a MOOT event to CAT reflecting their individual sides of the execution. Floor Broker must capture the *orderID* in the *sellDetails* of its MOOT event in order to link to its related MLOA event. Since Market Maker 1 was not required to report an MLOA event, Market Maker 1 must populate the *firmDesignatedID* field in the *buyDetails* of its MOOT event reflecting the FDID of the account associated with the execution.

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 **Multi-Leg New Order event*** type: MLNO orderKeyDate: 20210222T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210222T153010.34567 manualFlag: false	

#	Step	Reported Event	Comments
		electronicTimestamp: 20210222T153010.34567 deptType: T price: 18.15 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: firmDesignatedID: FRM345 accountHolderType: P affiliateFlag: false representativeInd: N solicitationFlag: false RFQID: numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: S legRatioQuantity: 1 legRefID: 2 symbol: XYZ side: B legRatioQuantity: 75	
3	Broker 1 routes the complex order with an equity leg through the Cboe Options exchange to Floor Broker	*Broker 1 reports a **Multi-Leg Order Route event*** type: MLOR orderKeyDate: 20210222T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210222T153036.323456 manualFlag: false senderIMID: 123:BRK1 destination: EXCH1 destinationType: E routedOrderID: RT343434 price: 18.15 quantity: 100 orderType: LMT timeInForce: DAY=20210222	The MLOR event must contain *handlingInstructions* values 'DIR' and 'FB'

#	Step	Reported Event	Comments
		tradingSession: REG handlingInstructions: DIR|FB affiliateFlag: false numberOfLegs: 2 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: S legRatioQuantity: 1 legRefID: 2 symbol: XYZ side: B legRatioQuantity: 75	
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* ***Complex Option Order Route event***	
6	Floor Broker accepts the complex order with equity leg from the Cboe Options exchange	*Floor Broker reports a* ***Multi-Leg Order Accepted event*** type: MLOA orderKeyDate: 20210222T000000 orderID: RTB910 underlying: XYZ eventTimestamp: 20210222T153037.223456 manualFlag: false receiverIMID: 456:FBRKR senderIMID: EXCH1 senderType: E routedOrderID: 55555 price: 18.15 quantity: 100 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 2 priceType: PU	

#	Step	Reported Event	Comments
		legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: S legRatioQuantity: 1 legRefID: 2 symbol: XYZ side: B legRatioQuantity: 75	
7	Floor Broker asks the trading crowd for a market and Market Maker 1 provides a verbal quote, then Floor Broker verbally represents the order in the crowd and trades in the crowd with Market Maker 1. The option leg is executed on the exchange floor.	*Floor Broker reports an Option Trade event* type: MOOT tradeKeyDate: 20210222T000000 tradeID: T12345 optionID: XYZ 210618C00022500 eventTimestamp: 20210222T133108 manualFlag: true electronicTimestamp: cancelFlag: false quantity: 100 price: 6.60 capacity: A tapeTradeID: S999999 sideDetailsInd: SELL sellDetails: orderKeyDate: 20210222T000000 orderID: RTB910 side: S firmDesignatedID: marketCenterID: CBOE multiLegInd: true	Floor Broker reports a single-sided MOOT event, representing its side of the trade, with the *orderID* populated. The *tapeTradeID* field is used to link to the Trade event reported to CAT by the Exchange. The *multiLegInd* field must be populated as 'true' to indicate that the immediately preceding event in the lifecycle was a multi-leg event. Note that the request for quote by Floor Broker is not reportable to CAT, and the verbal quote by Market Maker 1, as well as the representation of the order by Floor Broker, are subject to a temporary exemption from reporting to CAT. Please also note that use of the 'Represent' button on Floor Broker's PAR Workstation is not a CAT reportable event for Industry Members.
8	Market Maker verbally trades in the crowd with Floor Broker. The option leg is executed on the exchange floor.	*Market Maker 1 reports an Option Trade event* type: MOOT tradeKeyDate: 20210222T000000 tradeID: 99999 optionID: XYZ 210618C00022500 eventTimestamp: 20210222T133108 manualFlag: true electronicTimestamp: cancelFlag: false	Market Maker 1 reports a single-sided MOOT event, representing its side of the trade, with the *firmDesignatedID* and *accountHolderType* populated. The *tapeTradeID* field is used to link to the Trade event reported to CAT by the Exchange. While the related new order was not required to be reported by Market Maker 1, the *multiLegInd* field must be populated as 'true' to indicate that execution was related to a multi-leg order.

#	Step	Reported Event	Comments
		quantity: 100 price: 6.60 capacity: P tapeTradeID: B999999 sideDetailsInd: BUY buyDetails: orderKeyDate: orderID: side: B firmDesignatedID: MM12345 accountHolderType: O marketCenterID: CBOE multiLegInd: true	Note that the *eventTimestamp* must correspond with trade times recorded in Cboe's Market Maker Trade Notifications or Floor Trade Confirmation/Add messages, as applicable.
9	Market Maker 1 calls/manually originates a proprietary new equity leg order	*Market Maker 1 reports a **New Order event*** type: MENO orderKeyDate: 20210222T000000 orderID: MM3456 eventTimestamp: 20210222T153037 manualFlag: true electronicTimestamp: deptType: T side: SL price: 33 quantity: 7500 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG handlingInstructions: OPT firmDesignatedID: MM123 accountHolderType: O affiliateFlag: false representativeInd: N	While Market Maker 1 is not required to report the multi-leg verbal quote, Market Maker 1 is required to report the origination of the equity leg order with *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: 20210222T000000 orderID: MM3456 symbol: XYZ eventTimestamp: 20210222T153037	Market Maker 1 is required to report a *handlingInstructions* value of 'OPT' to indicate that the order is an options related order. The *multiLegInd* field must be 'false', as the immediately preceding event is a simple equity event, not a multi-leg event. If the *multiLegInd* field is populated as 'true', the firm will receive an intrafirm linkage error, as

#	Step	Reported Event	Comments
		manualFlag: true senderIMID: 555:MM1 destination: 789:BRK2 destinationType: F routedOrderID: side: SL price: 33 quantity: 7500 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: OPT multiLegInd: false	this field is used to determine if the event will link to a multi-leg event or a simple equity/option event. The *routedOrderID* field is not required for manual routes.
11	Floor Broker calls/manually routes the order to Broker 2 for execution	*Floor Broker reports an **Order Route event*** type: MEOR orderKeyDate: 20210222T000000 orderID: RTB910 symbol: XYZ eventTimestamp: 20210222T153037 manualFlag: true senderIMID: 456:FBRKR destination: 789:BRK2 destinationType: F routedOrderID: side: B price: 33 quantity: 7500 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: OPT multiLegInd: true	Since Floor Broker has assigned a price to the equity leg, the *price* field must be populated. Floor Broker is required to report a *handlingInstructions* value of 'OPT' to indicate that the order is an options related order. The *multiLegInd* must be populated as 'true' to indicate that the immediately preceding event in the order life cycle is a Multi-Leg order event. The *routedOrderID* field is not required for manual routes.
12	Broker 2 manually accepts the equity leg order from Floor Broker	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20210222T000000 orderID: ORD123 symbol: XYZ	Broker 2 is required to report a *handlingInstructions* value of 'OPT' to indicate that the order is an options related order. The *routedOrderID* field is not required for manual routes.

#	Step	Reported Event	Comments
		eventTimestamp: 20210222T153037 manualFlag: true electronicTimestamp: 20210222T153039.853456 receiverIMID: 789:BRK2 senderIMID: 456:FBRKR senderType: F routedOrderID: affiliateFlag: false deptType: T side: B price: 33 quantity: 7500 orderType: LMT timeInForce: DAY=20210222 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	
12	Broker 2 manually accepts the equity leg order from Market Maker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA orderKeyDate: 20210222T000000 orderID: ORD456 symbol: XYZ eventTimestamp: 20210222T153037 manualFlag: true electronicTimestamp: 20210222T153039.853456 receiverIMID: 789:BRK2 senderIMID: 555:MM1 senderType: F routedOrderID: affiliateFlag: false deptType: T side: SL price: 33 quantity: 7500 orderType: LMT timeInForce: DAY=20210222 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.

#	Step	Reported Event	Comments
13	Broker 2 crosses the Buy and Sell equity leg orders	*Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20210222T000000 tradeID: TXYZ123 symbol: XYZ eventTimestamp: 20210222T153039.853456 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 7500 price: 33 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20210222T000000 orderID: ORD123 side: B sellDetails: orderKeyDate: 20210222T000000 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 to CAT:
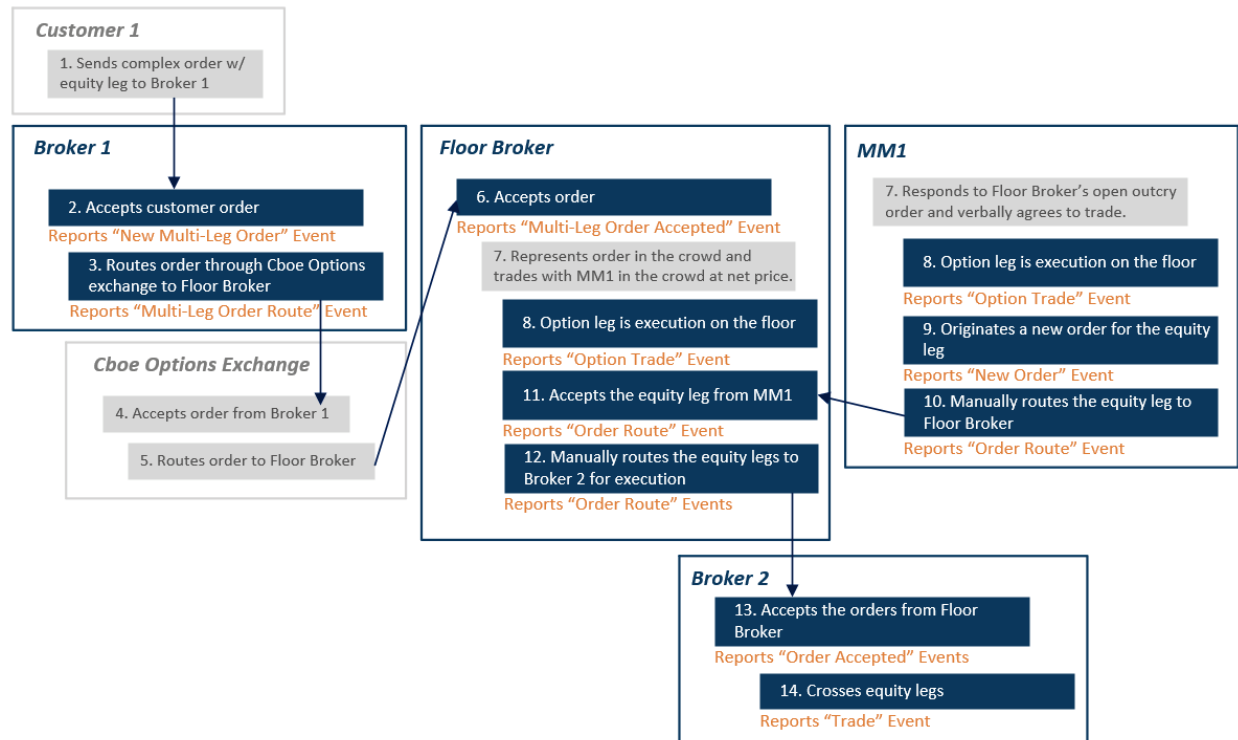
Industry Member Broker 1 is required to report:

- The receipt of the complex order from the customer (New Multi-Leg Order event)

- The route of the complex order to the exchange (Multi-Leg Order Route event with *handlingInstructions* 'DIR' and 'FB')

Industry Member Floor Broker is required to report:

- The receipt of the complex order from the exchange (Multi-Leg Order Accepted event)

- The trade of the options leg executed manually on the exchange floor in Open Outcry (Option Trade event)

- The receipt of the equity leg order from Market Maker 1 (Order Accepted event)

- 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:

- The trade of the options leg executed manually on the exchange floor in Open Outcry (Option Trade event)

- The origination of the equity leg order (New Order event with *handlingInstructions* 'OPT')

- The route of the multi-leg order to Floor Broker (Multi-Leg Order Route event)

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](#).

8.3. BOX Floor Broker Scenarios

This section illustrates the CAT reporting requirements for BOX Floor Members.

8.3.1. BOX Options Floor Broker Receives Offsetting Orders for Crossing in Open Outcry (no market interference)

This scenario illustrates the CAT reporting requirements when Industry Member Broker 1 receives a simple option order from a customer, solicits the contra side and routes the offsetting orders to an Industry Member Floor Broker on the BOX Exchange.

In this scenario, Broker 1 receives an order from a customer and calls Broker 2 to solicit the contra side of the order. Broker 2 verbally responds to Broker 1's solicitation and verbally originates/routes an order to Broker 1. Broker 1 verbally receives the order from Broker 2 and routes both offsetting orders to the Floor Broker. The Floor Broker represents the trade in the crowd and there is no market interest, so the Floor Broker routes the paired orders to the exchange Matching Engine for execution.

For illustration purposes, this scenario begins with the receipt of the offsetting orders by the BOX Floor Broker. The reporting requirements for one possible workflow leading up to the offsetting order routes can be found in Scenario 3.7.4, (Steps 1 - 7)
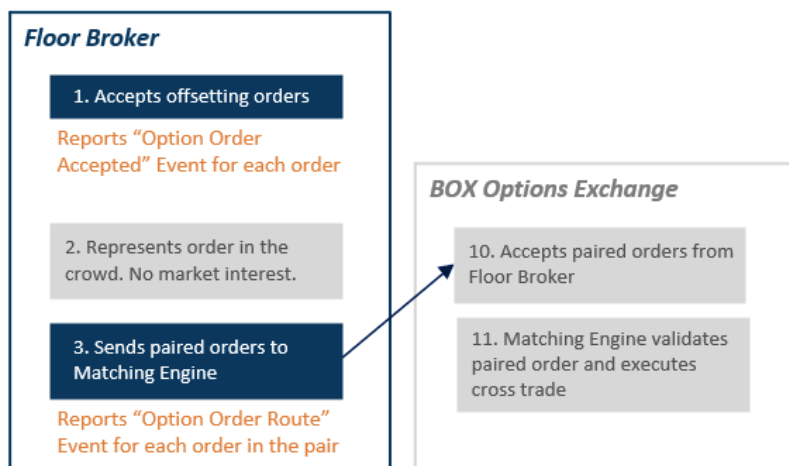
Industry Member Floor Broker is required to report:

- The receipt of the offsetting orders from Broker 1 (Option Order Accepted events)
- The route of the paired orders to the exchange to confirm and execute the floor cross trade (Option Order Route events)

BOX Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Floor Broker accepts the offsetting orders from Broker 1	*Floor Broker reports an **Option Order Accepted event (1/2)** type: MOOA orderKeyDate: 20210528T000000 orderID: FBO-B-20210528_1 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T101527.8357 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F routedOrderID: B-RT555 deptType: T side: B price: 7.50 quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG affiliateFlag: false openCloseIndicator: Open *Floor Broker reports an **Option Order Accepted event (2/2)** type: MOOA orderKeyDate: 20210528T000000 orderID: FBO-S-20210528_1 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T101527.8357 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F routedOrderID: S-RT555 deptType: T side: S price: 7.50	

#	Step	Reported Event	Comments
		quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG affiliateFlag: false openCloseIndicator: Open	
2	Floor Broker represents order in the crowd	*N/A*	
3	Floor Broker executes trade by sending paired orders to BOX Matching Engine	*Floor Broker reports an **Option Order Route event (1/2)*** type: MOOR orderKeyDate: 20210528T000000 orderID: FBO-B-20210528_1 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T133033.4684 senderIMID: 456:FBRKR destination: BOX destinationType: E routedOrderID: RT4210 session: EFGH4567 side: B price: 7.50 quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open pairedOrderID: FBX123 *Floor Broker reports an **Option Order Route event (2/2)*** type: MOOR orderKeyDate: 20210528T000000 orderID: FBO-S-20210528_1 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T133033.4684 senderIMID: 456:FBRKR destination: BOX destinationType: E	.

#	Step	Reported Event	Comments
		routedOrderID: RT4215 session: EFGH4567 side: S price: 7.50 quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG exchOriginCode: F affiliateFlag: false openCloseIndicator: Open pairedOrderID: FBX123	
4	BOX Options exchange accepts the paired option orders from Floor Broker into the exchange matching engine for crossing.	*Exchange reports a Participant **Order Accept event** for each order in the pair.*	
5	BOX Options exchange matching engine executes the full quantity of the paired option orders	*Exchange reports a Participant **Simple Option Trade events** on each order*	

8.3.2. BOX Options Floor Broker Receives Offsetting Orders for Crossing in Open Outcry (Floor Market Maker takes partial contra side)

This scenario illustrates the CAT reporting requirements when Industry Member Broker 1 receives a simple option order from a customer, solicits the contra side and routes the order to an Industry Member Floor Broker on the BOX Exchange.

In this scenario, Broker 1 receives an order from a customer and calls Broker 2 to solicit the contra side of the order. Broker 2 verbally responds to Broker 1's solicitation and verbally originates/routes an order to Broker 1. Broker 1 verbally receives the order from Broker 2 and routes both offsetting orders to the Floor Broker. The Floor Broker represents the trade in the crowd and a Floor Market Maker wants to participate in the cross for a partial quantity on the contra side. The Floor Broker pairs Broker 2's order with the customer's order routes the paired order to the exchange Matching Engine for execution. Upon execution, the Floor Broker updates the contra side trade to assign a partial quantity to the Market Maker.

For illustration purposes, this scenario begins with the receipt of two offsetting orders by the BOX Floor Broker. The reporting requirements for one possible workflow leading up to the paired orders can be found in <u>Scenario 3.7.4, Steps 1 - 7</u>.
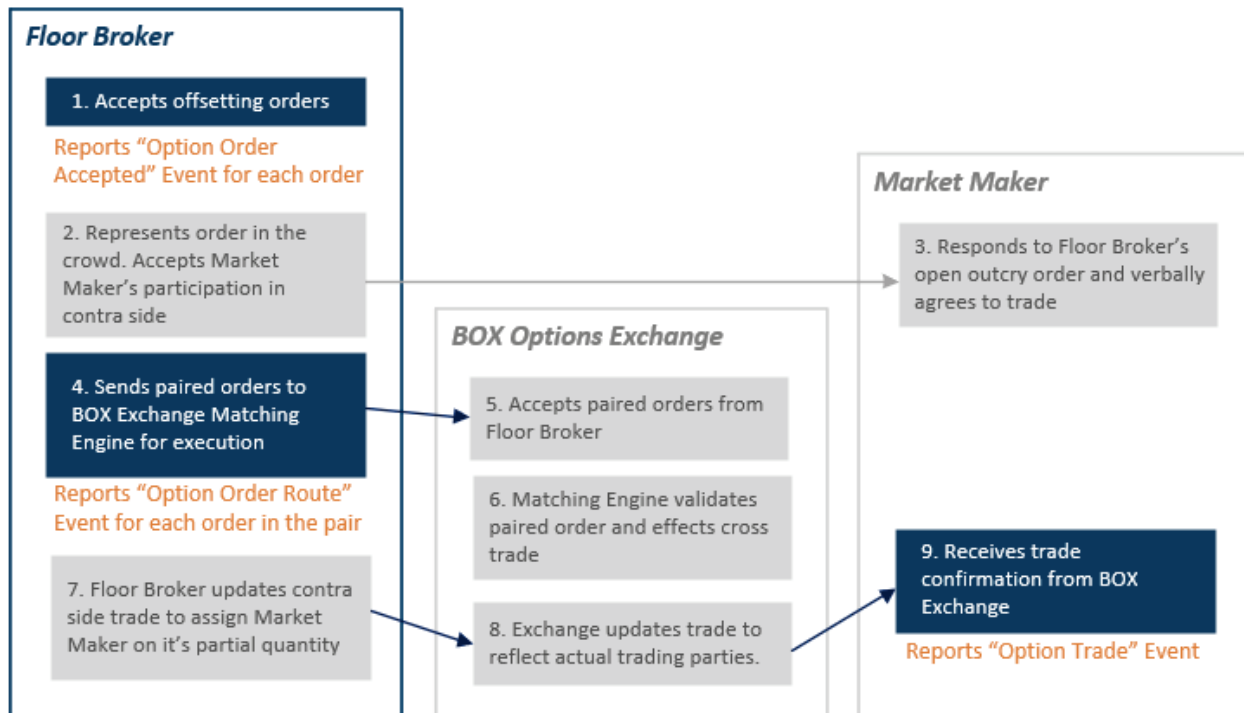
Industry Member Floor Broker is required to report:

- The receipt of the orders from Broker 1 (Option Order Accepted events)
- The route of the paired orders to the exchange to confirm and execute the floor cross trade (Option Order Route events)

Industry Member Market Maker is required to report:

- The trade executed by Floor Broker on the BOX Exchange (Option Trade event)

Note that Market Maker 1's verbal quote is not currently reportable to CAT (market maker verbal announcements of firm quotes on an exchange trading floor are subject to the SEC's November 12, 2020 order granting a temporary conditional exemption relating to the reporting of certain on and off floor activities until July 31, 2023).

BOX Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Floor Broker accepts two offsetting orders from Broker 1	*Floor Broker reports an **Option Order Accepted event (1/2)*** type: MOOA orderKeyDate: 20210528T000000 orderID: FBO-B-20210528_1	

#	Step	Reported Event	Comments
		optionID: ABCD 220121C00062500 eventTimestamp: 20210528T101527.8357 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F routedOrderID: B-RT555 deptType: T side: B price: 7.50 quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG affiliateFlag: false openCloseIndicator: Open *Floor Broker reports an **Option Order Accepted event (2/2)*** type: MOOA orderKeyDate: 20210528T000000 orderID: FBO-S-20210528_1 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T101527.8357 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F routedOrderID: S-RT555 deptType: T side: S price: 7.50 quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG affiliateFlag: false openCloseIndicator: Open	
2	Floor Broker represents trade in the crowd	*N/A*	
3	Market Maker verbally agrees to trade partial contra quantity	*N/A*	Market Maker currently has no obligation to report the verbal response, per the SEC order granting temporary verbal quote relief.

#	Step	Reported Event	Comments
4	Floor Broker executes trade by pairing Broker 2's order with the customer's order and sending the paired orders to BOX Matching Engine	*Floor Broker reports an **Option Order Route event (1/2)*** type: MOOR orderKeyDate: 20210528T000000 orderID: FBO-B-20210528_1 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T133033.4684 senderIMID: 456:FBRKR destination: BOX destinationType: E routedOrderID: RT4210 session: EFGH4567 side: B price: 7.50 quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG exchOriginCode: C affiliateFlag: false openCloseIndicator: Open pairedOrderID: FBX123 *Floor Broker reports an **Option Order Route event (2/2)*** type: MOOR orderKeyDate: 20210528T000000 orderID: FBO-S-20210528_1 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T133033.4684 senderIMID: 456:FBRKR destination: BOX destinationType: E routedOrderID: RT4215 session: EFGH4567 side: S price: 7.50 quantity: 10 orderType: LMT timeInForce: DAY=20210528 tradingSession: REG exchOriginCode: F affiliateFlag: false openCloseIndicator: Open	While Market Maker agreed to a partial execution on the contra side, both paired routes to the exchange are for the full 10 shares quantity of the execution. Market Maker's clearing information on the contra portion is updated in steps 13 and 14.

#	Step	Reported Event	Comments
		pairedOrderID: FBX123	
5	BOX Options exchange accepts the paired option orders from Floor Broker into the exchange matching engine for crossing.	*Exchange reports a Participant **Order Accept event** for each order in the pair.*	
6	BOX Options exchange matching engine executes the full quantity of the paired option orders	*Exchange reports a Participant **Simple Option Trade events on each order***	
7	Floor Broker updates trade with MM's clearing information on contra portion	*N/A*	Industry Member clearing updates are not CAT reportable.
8	Exchange updates trade to reflect actual trading parties	*Exchange reports Participant **Simple Option Trade Allocation events***	
9	Market Maker receives trade confirmation from exchange	*Market Maker reports an **Option Trade event*** type: MOOT tradeKeyDate: 20210528T000000 tradeID: 99999 optionID: ABCD 220121C00062500 eventTimestamp: 20210528T133034 manualFlag: true electronicTimestamp: cancelFlag: false quantity: 5 price: 7.50 capacity: P tapeTradeID: S999999 sideDetailsInd: SELL buyDetails: orderKeyDate: orderID: side: S firmDesignatedID: MM12345 accountHolderType: O marketCenterID: BOX multiLegInd: false	While the related new order was not required to be reported by Market Maker 1, Market Maker 1 must report a single-sided MOOT event representing its side of the trade. The *firmDesignatedID* and *accountHolderType* populated. The *tapeTradeID* field is used to link to the Trade event reported to CAT by the Exchange.

8.4. PHLX Floor Broker Scenarios

This section illustrates the CAT reporting requirements for PHLX Floor Members.

8.4.1. PHLX Options Floor Broker Receives Offsetting Orders for Crossing in Open Outcry (no market interference)

This scenario illustrates the CAT reporting requirements when Industry Member Broker 1 routes two offsetting simple option orders to an Industry Member Floor Broker on the PHLX Exchange for trading in Open Outcry. In this scenario, Broker 1 routes two offsetting orders to the Floor Broker. The Floor Broker represents the orders in the crowd and there is no market interest, so the Floor Broker sends a trade request to the Exchange.
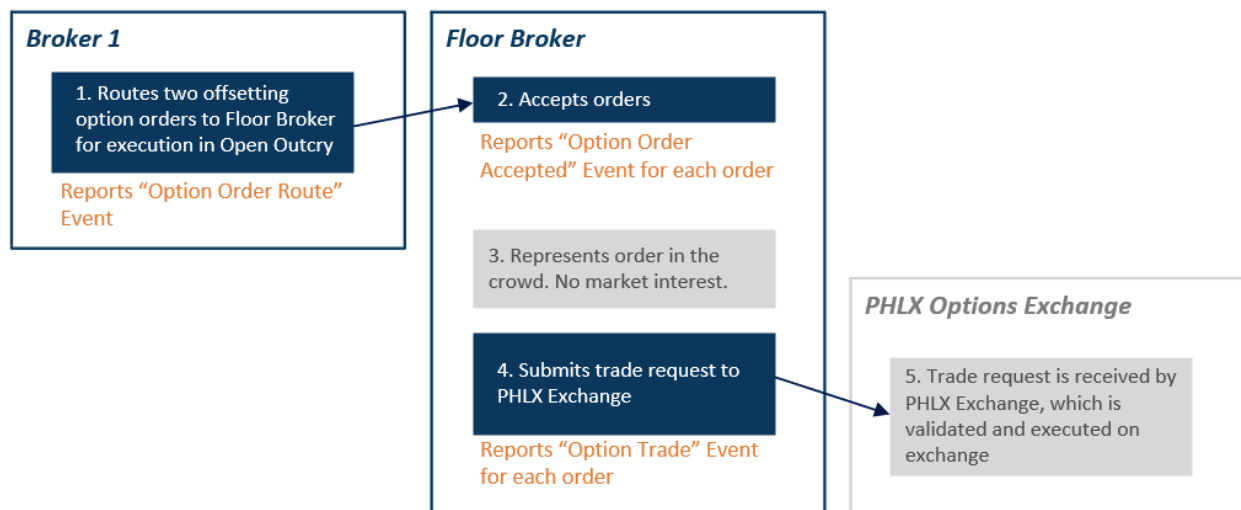
For illustration purposes, this scenario begins with the route of offsetting orders by Broker 1 to the PHLX Floor Broker. The reporting requirements for one possible workflow leading up to the offsetting orders can be found in 3.7.4, (Steps 1 – 7).

Industry Member Broker 1 is required to report:

- The route of the order to Floor Broker (Option Order Route events)

Industry Member Floor Broker is required to report:

- The receipt of the orders from Broker 1 (Option Order Accepted events)
- The initial side of the open outcry trade sent to the exchange (Option Trade event)
- The contra side of the open outcry trade sent to the exchange (Option Trade event)

PHLX Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Broker 1 routes two offsetting orders to Floor Broker for execution in open outcry	*Broker 1 reports an Option Order Route event for each order* type: MOOR orderKeyDate: 20210630T000000 orderID: O12345 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101522.8357 manualFlag: false electronicDupFlag: false senderIMID: 123:BRKR01 destination: 456:FBRKR destinationType: F routedOrderID: S-RT555 side: S price: 3.25 quantity: 45 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: C affiliateFlag: false multiLegInd false openCloseIndicator: Close type: MOOR orderKeyDate: 20210630T000000 orderID: O12346 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101527.5712 manualFlag: false electronicDupFlag: false senderIMID: 123:BRKR01 destination: 456:FBRKR destinationType: F routedOrderID: B-RT555 side: B price: 3.25 quantity: 45 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: C affiliateFlag: false	

#	Step	Reported Event	Comments
		multiLegInd: false openCloseIndicator: Close	
2	Floor Broker accepts the simple option orders from Broker 1	*Floor Broker reports an **Option Order Accepted event** for each of the orders.* type: MOOA orderKeyDate: 20210630T000000 orderID: FBO-S-20210630_1 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101522.8357 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F routedOrderID: S-RT555 deptType: T side: S price: 3.25 quantity: 45 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG affiliateFlag: false openCloseIndicator: Open type: MOOA orderKeyDate: 20210630T000000 orderID: FBO-B-20210630_1 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101527.8357 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F routedOrderID: B-RT555 deptType: T side: B price: 3.25 quantity: 45 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG affiliateFlag: false openCloseIndicator: Open	
3	Floor Broker	*N/A*	

#	Step	Reported Event	Comments
	represents orders in the crowd		
4	Floor Broker sends open outcry trade request details to PHLX Options Exchange	*Floor Broker reports an **Option Trade event** for each open outcry trade* type: MOOT tradeKeyDate: 20210630T000000 tradeID: FBTID001 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T133030 manualFlag: true cancelFlag: false quantity: 45 price: 3.25 capacity: A tapeTradeID: 99999 sideDetailsInd: SELL sellDetails: orderKeyDate: 20210630T000000 orderID: FBO-S-20210630_1 side: S firmDesignatedID: accountHolderType: marketCenterID: PHLX multiLegInd: false type: MOOT tradeKeyDate: 20210630T000000 tradeID: FBTID002 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T133030 manualFlag: true cancelFlag: false quantity: 45 price: 3.25 capacity: A tapeTradeID: 99999 sideDetailsInd: BUY buyDetails: orderKeyDate: 20210630T000000 orderID: FBO-B-20210630_1 side: B firmDesignatedID: accountHolderType: marketCenterID: PHLX multiLegInd: false	Floor Broker reports a single-sided MOOT event for each side of the trade, with the respective *orderID* populated. The *tapeTradeID* field is used to link to the Trade event reported to CAT by the Exchange.
5	PHLX Options	*Exchange reports a Participant **Option**	

#	Step	Reported Event	Comments
	exchange accepts and executes the open outcry trade	*Trade event*.	

8.4.2. PHLX Options Floor Broker Receives Offsetting Orders for Crossing in Open Outcry (Floor Market Maker takes partial contra side)

This scenario illustrates the CAT reporting requirements when Industry Member Broker 1 routes offsetting simple option orders to an Industry Member Floor Broker on the PHLX Exchange.

In this scenario, Broker 1 routes two offsetting orders to the Floor Broker. The Floor Broker represents the orders in the crowd and a Floor Market Maker elects to participate in the cross for a partial quantity on the contra side. The Floor Broker sends a trade request to the Exchange, to confirm and execute the trade, for the total quantity on the agency side of the order.
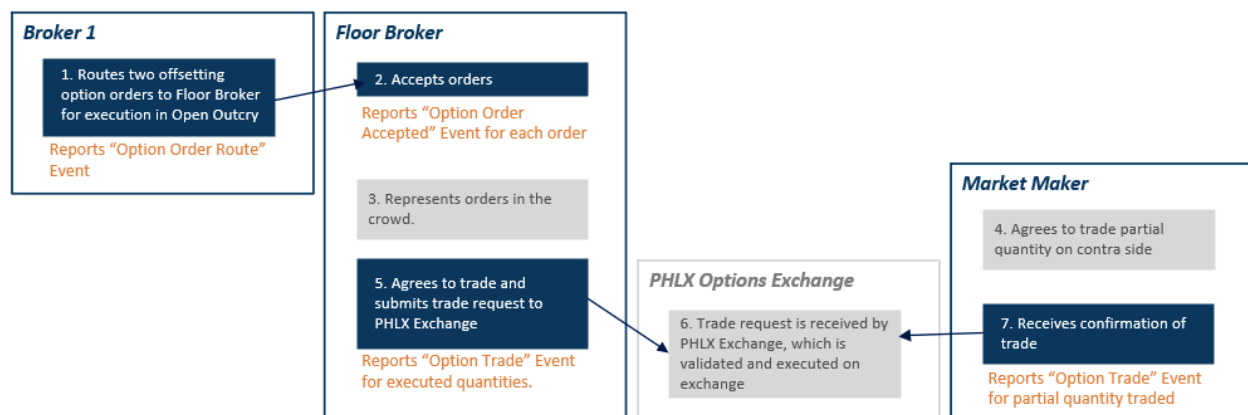
For illustration purposes, this scenario begins with the route of the offsetting orders by Broker 1 to the PHLX Floor Broker. The reporting requirements for one possible workflow leading up to the offsetting orders can be found in 3.7.4, Steps 1 - 7.

Note that Market Maker's verbal quote is not currently reportable to CAT (market maker verbal announcements of firm quotes on an exchange trading floor are subject to the SEC's November 12, 2020 order granting a temporary conditional exemption relating to the reporting of certain on and off floor activities until July 31, 2023). Market Maker is required to report a MOOT event to CAT reflecting their side of the execution.

Industry Member Broker 1 is required to report:

- The route of the order to Floor Broker (Option Order Route events)

Industry Member Floor Broker is required to report:

- The receipt of the simple option orders from Broker 1 (Option Order Accepted events)
- The open outcry trades for the initial side order of 33 total contracts (Option Trade events)
- The open outcry trade for the contra order of 20 contracts (Option Trade event)

Industry Member Market Maker is required to report:

- The open outcry trade for 13 contracts executed by Floor Broker on the PHLX Exchange (Option Trade event)

PHLX Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Broker 1 routes two offsetting orders to Floor Broker for execution in open outcry	*Floor Broker reports an **Option Order Route event (1/2)*** type: MOOR orderKeyDate: 20210630T000000 orderID: O12345 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101527.1234 manualFlag: false electronicDupFlag: false senderIMID: 123:BRKR01 destination: 456:FBRKR destinationType: F routedOrderID: S-RT617 side: S price: 2.65 quantity: 33 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: C affiliateFlag: false multiLegInd false openCloseIndicator: Open type: MOOR orderKeyDate: 20210630T000000 orderID: O12346 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101527.5677 manualFlag: false electronicDupFlag: false senderIMID: 123:BRKR01	type: MOOA orderKeyDate: 20210630T000000 orderID: FBO-S-20210630_002 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101527.8357 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F routedOrderID: S-RT617 deptType: T side: S price: 2.65 quantity: 33 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG affiliateFlag: false openCloseIndicator: Open type: MOOA orderKeyDate: 20210630T000000 orderID: FBO-B-20210630_002 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101527.8689 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01

#	Step	Reported Event	Comments
		destination: 456:FBRKR destinationType: F routedOrderID: S-RT617 side: B price: 2.65 quantity: 33 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: C affiliateFlag: false multiLegInd: false openCloseIndicator: Open	senderType: F routedOrderID: B-RT617 deptType: T side: B price: 2.65 quantity: 33 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG affiliateFlag: false openCloseIndicator: Open
2	Floor Broker accepts the simple option orders from Broker 1	*Floor Broker reports an **Option Order Accepted event*** type: MOOA orderKeyDate: 20210630T000000 orderID: FBO-S-20210630_002 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101527.8357 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F routedOrderID: S-RT617 deptType: T side: S price: 2.65 quantity: 33 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG affiliateFlag: false openCloseIndicator: Open type: MOOA orderKeyDate: 20210630T000000 orderID: FBO-B-20210630_002 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101527.8689 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F routedOrderID: B-RT617 deptType: T	

#	Step	Reported Event	Comments
		side: B price: 2.65 quantity: 33 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG affiliateFlag: false openCloseIndicator: Open	
2	Floor Broker represents orders in the crowd	*N/A*	
3	Market Maker verbally agrees to trade partial contra quantity	*N/A*	Per the SEC order, Market Maker has no obligation to report his verbal quote response.
4	Floor Broker sends trade requests to the PHLX Exchange	*Floor Broker reports an **Option Trade event** for each open outcry trade* type: MOOT tradeKeyDate: 20210630T000000 tradeID: 112233 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T133030 manualFlag: true cancelFlag: false quantity: 20 price: 2.65 capacity: A tapeTradeID: 8675309 sideDetailsInd: SELL sellDetails: orderKeyDate: 20210630T000000 orderID: FBO-S-20210630_002 side: S firmDesignatedID: accountHolderType: marketCenterID: PHLX multiLegInd: false type: MOOT tradeKeyDate: 20210630T000000 tradeID: 123123 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T133030 manualFlag: true cancelFlag: false quantity: 13	Floor Broker reports a single-sided MOOT event for each the trade, with the respective *orderID* populated. In this scenario, there are two trades on the initial (agency) side, and one trade on the contra side. The *tapeTradeID* field is used to link to the Trade event reported to CAT by the Exchange.

#	Step	Reported Event	Comments
		price: 2.65 capacity: A tapeTradeID: 8675310 sideDetailsInd: SELL sellDetails: orderKeyDate: 20210630T000000 orderID: FBO-S-20210630_002 side: S firmDesignatedID: accountHolderType: marketCenterID: PHLX multiLegInd: false type: MOOT tradeKeyDate: 20210630T000000 tradeID: 123456 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T133030 manualFlag: true cancelFlag: false quantity: 20 price: 2.65 capacity: A tapeTradeID: 8675309 sideDetailsInd: BUY buyDetails: orderKeyDate: 20210630T000000 orderID: FBO-B-20210630_002 side: B firmDesignatedID: accountHolderType: marketCenterID: PHLX multiLegInd: false	
5	PHLX Options exchange accepts and executes the open outcry trade	*Exchange reports a Participant **Order Trade event** for each open outcry trade*	
6	Market Maker receives trade confirmation	*Market Maker reports an **Option Trade event*** type: MOOT tradeKeyDate: 20210630T000000 tradeID: TRD-333 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T133030 manualFlag: true cancelFlag: false	Market Maker 1 reports a single-sided MOOT event, representing its side of the trade, with the *firmDesignatedID* and *accountHolderType* fields populated. The *tapeTradeID* field is used to link to the Trade event reported to CAT by the Exchange.

#	Step	Reported Event	Comments
		quantity: 13 price: 2.65 capacity: P tapeTradeID: 8675310 sideDetailsInd: BUY buyDetails: orderKeyDate: orderID: side: B firmDesignatedID: MM-4444 accountHolderType: O marketCenterID: PHLX multiLegInd: false	

8.4.3. PHLX Options Floor Broker Receives Offsetting Multi-leg Orders for Crossing in Open Outcry (Floor Market Maker takes full contra side)

This scenario illustrates the CAT reporting requirements when Industry Member Broker 1 routes two offsetting multi-leg orders to an Industry Member Floor Broker on the PHLX Exchange for trading in Open Outcry.

In this scenario, Broker 1 routes two multi-leg orders to the Floor Broker. The Floor Broker represents the orders in the crowd and a Floor Market Maker elects to participate in the cross for the full quantity of the contra side. The Floor Broker sends the trade requests for each option leg to the Exchange to confirm and execute the trades. The Floor Broker routes the initial side equity leg to Equity Broker 2 for execution. The Floor Market Maker routes the equity leg for the contra side to Equity Broker 2 for execution.
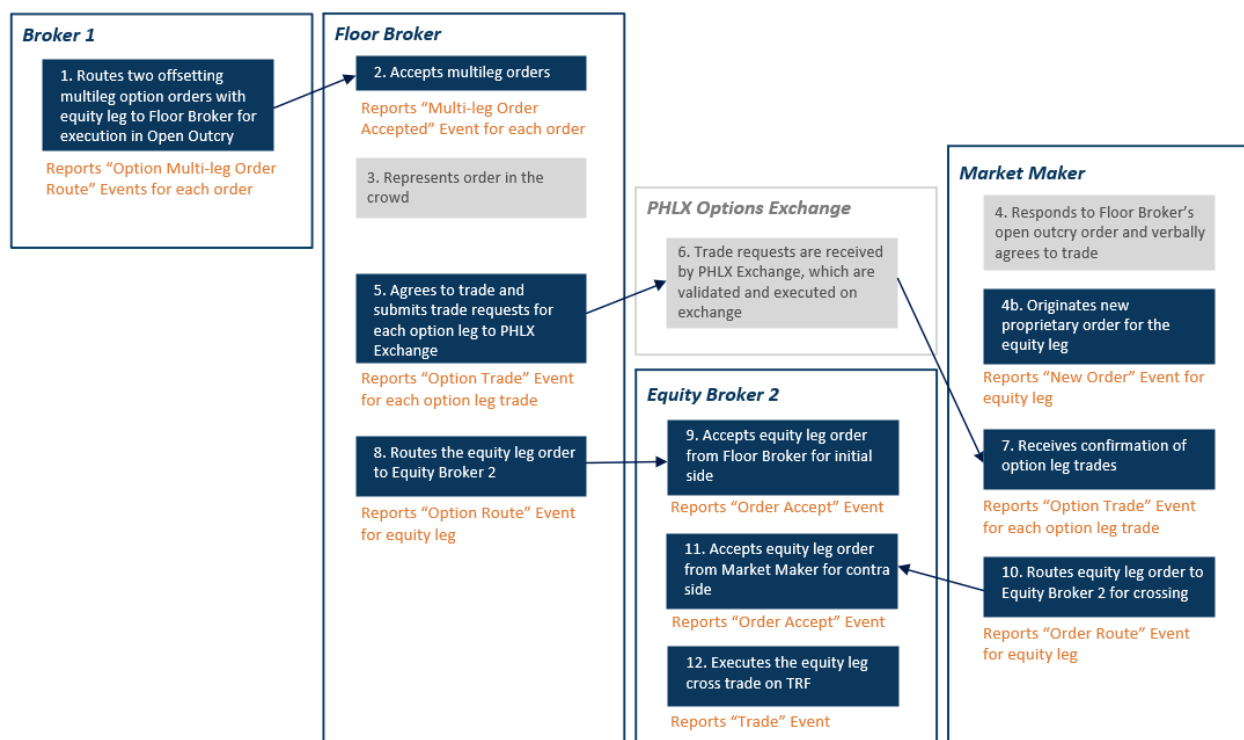
For illustration purposes, this scenario begins with the routes of two offsetting multi-leg orders by the Broker 1 to PHLX Floor Broker. The reporting requirements for one possible workflow leading up to the offsetting orders can be found in 3.6.6 (Steps 1 – 3)

Note that Market Maker's verbal quote for the option legs is not currently reportable to CAT (market maker verbal announcements of firm quotes on an exchange trading floor are subject to the SEC's November 12, 2020 order granting a temporary conditional exemption relating to the reporting of certain on and off floor activities until July 31, 2023). Market Maker is required to report a MOOT event to CAT reflecting their side of the execution for each option leg. Market Maker is also required to report the equity order origination (MENO event) and the route of that equity order for execution (MEOR event).

Industry Member Broker 1 is required to report:

- The route of the multi-leg orders to Floor Broker (Multi-leg Order Route events)

Industry Member Floor Broker is required to report:

- The receipt of the multi-leg orders from Broker 1 (Multi-leg Order Accepted events)
- The open outcry trades for the initial side order (Option Trade events)
- The route of the agency equity leg order to Equity Broker 2 (Order Route event)

Industry Member Market Maker is required to report:

- The open outcry trades executed by Floor Broker on the PHLX Exchange (Option Trade events)

- The origination of the equity leg order (New Order event)

- The route of the equity order to Equity Broker 2 (Order Route event)

Industry Member Equity Broker 2 is required to report:

- The receipt of the initial side order from Floor Broker (Order Accepted event)

- The receipt of the contra side order from Market Maker (Order Accepted event)

- The execution of the orders (Trade event)

PHLX Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Broker 1 sends two offsetting multileg orders to Floor Broker	*Broker 1 reports a **Multi-Leg Order Route event** for each order* type: MLOR orderKeyDate: 20210615T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210615T153038.223456 manualFlag: false senderIMID: 123:BRKA destination: FBRKR destinationType: F routedOrderID: RTO-99998 price: 16.35 quantity: 50 orderType: LMT timeInForce: DAY=20210615 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: S legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00035000 openCloseIndicator: Open side: B legRatioQuantity: 1	

#	Step	Reported Event	Comments
		legRefID: 3 symbol: XYZ side: B legRatioQuantity: 41 *Broker 1 reports a **Multi-Leg Order Route event (2/2)*** type: MLOR orderKeyDate: 20210615T000000 orderID: P222444 underlying: XYZ eventTimestamp: 20210615T153038.223456 manualFlag: false senderIMID: 123:BRKA destination: FBRKR destinationType: F routedOrderID: RTO-99999 price: -16.35 quantity: 50 orderType: LMT timeInForce: DAY=20210615 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00035000 openCloseIndicator: Open side: S legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: SL legRatioQuantity: 41	
2	Floor Broker accepts the multi-leg orders	*Floor Broker reports a **Multi-Leg Option Order Accepted event** for each order*	

#	Step	Reported Event	Comments

	from Broker 1	type: MLOA
		orderKeyDate: 20210615T000000
		orderID: FB-MLEG1111
		underlying: XYZ
		eventTimestamp:
		20210615T153038.456123
		manualFlag: false
		receiverIMID: 456:FBRKR
		senderIMID: 123:BRKA
		senderType: F
		routedOrderID: RTO-99998
		price: 16.35
		quantity: 50
		orderType: LMT
		timeInForce: DAY=20210615
		tradingSession: REG
		handlingInstructions:
		affiliateFlag: false
		numberOfLegs: 3
		priceType: PU
		legDetails:
		    legRefID: 1
		    optionID:
		    XYZ 210810C00032000
		    openCloseIndicator: Open
		    side: S
		    legRatioQuantity: 1
		
		    legRefID: 2
		    optionID:
		    XYZ 210810C00035000
		    openCloseIndicator: Open
		    side: B
		    legRatioQuantity: 1
		
		    legRefID: 3
		    symbol: XYZ
		    side: B
		    legRatioQuantity: 41
		
		type: MLOA
		orderKeyDate: 20210615T000000
		orderID: FBMLEG-2222
		underlying: XYZ
		eventTimestamp:
		20210615T153038.456123
		manualFlag: false
		receiverIMID: 456:FBRKR
		senderIMID: 123:BRKA	

#	Step	Reported Event	Comments
		senderType: F routedOrderID: RTO-99999 price: -16.35 quantity: 50 orderType: LMT timeInForce: DAY=20210615 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00035000 openCloseIndicator: Open side: S legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: SL legRatioQuantity: 41	
3	Floor Broker represents orders in the crowd	*N/A*	
4	Market Maker verbally agrees to trade full contra quantity	*N/A*	While Market Maker 1 is not required to report the multi-leg verbal quote for the option legs. However, Market Maker 1 is required to report the origination of the equity leg order with a *handlingInstructions* value of 'OPT' to indicate that the order is an options related order.
4b	Market Maker originates an order for the equity leg	*Market Maker reports a **New Order event** for the equity leg.* type: MENO orderKeyDate: 20210615T000000 orderID: MM3456 eventTimestamp: 20210615T153037 manualFlag: true	

#	Step	Reported Event	Comments
		electronicTimestamp: deptType: T side: SL price: 29.75 quantity: 2,050 orderType: LMT timeInForce: DAY=20210615 tradingSession: REG handlingInstructions: OPT firmDesignatedID: MM-4444 accountHolderType: O affiliateFlag: false representativeInd: N	
5	Floor Broker sends trade requests to the PHLX Exchange	*Floor Broker reports an **Option Trade** event for Leg 1 initial side (1/2)* type: MOOT tradeKeyDate: 20210615T000000 tradeID: 112233-1 optionID: XYZ 210810C00032000 eventTimestamp: 20210630T133045 manualFlag: true cancelFlag: false quantity: 50 price: 1.10 capacity: A tapeTradeID: 90210 sideDetailsInd: SELL sellDetails: orderKeyDate: 20210615T000000 orderID: FBMLEG-1111 side: S firmDesignatedID: accountHolderType marketCenterID: PHLX multiLegInd: true *Floor Broker reports an **Option Trade** event for Leg 2 initial side (1/2)* type: MOOT tradeKeyDate: 20210615T000000 tradeID: 112234-2 optionID: XYZ 210810C00035000 eventTimestamp: 20210630T133045 manualFlag: true cancelFlag: false quantity: 50	Floor Broker reports a single-sided MOOT event for each leg, representing its side of the trade, with the *orderID* of the multileg order populated. The *multiLegInd* field must be populated as 'true' to indicate that the immediately preceding event in the lifecycle was a multi-leg event. The *tapeTradeID* field is used to link to the Trade event reported to CAT by the Exchange.

#	Step	Reported Event	Comments
		price: 2.05 capacity: A tapeTradeID: 90211 sideDetailsInd: BUY buyDetails: orderKeyDate: 20210615T000000 orderID: FBMLEG-1111 side: B firmDesignatedID: accountHolderType marketCenterID: PHLX multiLegInd: true	
6	PHLX Options exchange accepts and executes the open outcry trades.	*Exchange reports a Participant **Order Trade event** for each open outcry trade.*	
7	Market Maker receives confirmation of option leg trades	*Market Maker reports an **Option Trade** event for Leg 1 contra side. (1/2)* type: MOOT tradeKeyDate: 20210615T000000 tradeID: MMTD201 optionID: XYZ 210810C00032000 eventTimestamp: 20210630T133045 manualFlag: true cancelFlag: false quantity: 50 price: 1.10 capacity: P tapeTradeID: 90210 sideDetailsInd: BUY buyDetails: orderKeyDate: orderID: side: B firmDesignatedID:MM-4444 accountHolderType: O marketCenterID: PHLX multiLegInd: true *Market Maker reports an **Option Trade** event for Leg 2 initial side (2/2)* type: MOOT tradeKeyDate: 20210615T000000 tradeID: MMTD202 optionID: XYZ 210810C00035000	Market Maker 1 reports a single-sided MOOT event for the contra side of each leg trade, with the *firmDesignatedID* and *accountHolderType* fields populated. The *multiLegInd* field must be populated as 'true' to indicate that the trades are for a multileg order. The *tapeTradeID* field is used to link to the Trade event reported to CAT by the Exchange.

#	Step	Reported Event	Comments
		eventTimestamp: 20210630T133045 manualFlag: true cancelFlag: false quantity: 50 price: 2.05 capacity: P tapeTradeID: 90211 sideDetailsInd: SELL sellDetails: orderKeyDate: orderID: side: S firmDesignatedID: MM-4444 accountHolderType: O marketCenterID: PHLX multiLegInd: true	
8	Floor Broker routes the equity leg of the initial order to Equity Broker 2 for execution.	*Floor Broker reports an **Order Route event** for agency equity order* type: MEOR orderKeyDate: 20210615T000000 orderID: MM3456 symbol: XYZ eventTimestamp: 20210615T153037 manualFlag: true senderIMID: 456:FBRKR destination: 789:BRK2 destinationType: F side: B price: 29.75 quantity: 2050 orderType: LMT timeInForce: DAY=20210615 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: OPT multiLegInd: true	Since Floor Broker has assigned a price to the equity leg, the *price* field must be populated. Floor Broker is required to report a *handlingInstructions* value of 'OPT' to indicate that the order is an options related order. The multiLegInd must be populated as 'true' to indicate that the immediately preceding event in the order life cycle is a Multi-Leg order event. The *routedOrderID* field is not required for manual routes.
9	Equity Broker 2 accepts the equity leg order from Floor Broker	*Equity Broker 2 reports an **Order Accept event*** type: MEOA orderKeyDate: 20210615T000000 orderID: ORD123 symbol: XYZ eventTimestamp: 20210615T153037	

#	Step	Reported Event	Comments
		manualFlag: true receiverIMID: 789:BRK2 senderIMID: 456:FBRKR senderType: F affiliateFlag: false deptType: T side: B price: 29.75 quantity: 2050 orderType: LMT timeInForce: DAY=20210615 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	
10	Market Maker manually routes equity leg order to Equity Broker 2	*Market Maker reports an **Order Route event** for the equity leg.* type: MEOR orderKeyDate: 20210615T000000 orderID: MM3456 symbol: XYZ eventTimestamp: 20210615T153037 manualFlag: true senderIMID: 555:MM1 destination: 789:BRK2 destinationType: F side: SL price: 29.75 quantity: 2050 orderType: LMT timeInForce: DAY=20210615 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: OPT multiLegInd: false	Market Maker 1 is required to report a *handlingInstructions* value of 'OPT' to indicate that the order is an options related order. The *multiLegInd* field must be 'false', as the immediately preceding event is a simple equity event, not a multi-leg event. If the *multiLegInd* field is populated as 'true', the firm will receive an intrafirm linkage error, as this field is used to determine if the event will link to a multi-leg event or a simple equity/option event. The *routedOrderID* field is not required for manual routes.
11	Equity Broker 2 accepts the equity leg order from Floor Broker	*Equity Broker 2 reports an **Order Accept event*** type: MEOA orderKeyDate: 20210615T000000 orderID: ORD124 symbol: XYZ eventTimestamp: 20210615T153037 manualFlag: true	

#	Step	Reported Event	Comments
		receiverIMID: 789:BRK2 senderIMID: 444:MM1 senderType: F affiliateFlag: false deptType: T side: SL price: 29.75 quantity: 2050 orderType: LMT timeInForce: DAY=20210615 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	
12	Equity Broker 2 crosses the orders	*Equity Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20210615T000000 tradeID: TXYZ124 symbol: XYZ eventTimestamp: 20210615T153356.234561 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 2050 price: 29.75 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20210615T000000 orderID: ORD123 side: B sellDetails: orderKeyDate: 20210615T000000 orderID: ORD124 side: SL	

8.5.   AMEROP Floor Broker Scenarios

This section illustrates the CAT reporting requirements for AMEROP Floor Members.

8.5.1. AMEROP Options Floor Broker Receives an Order and Trades against a Floor Market Maker in Open Outcry

This scenario illustrates the CAT reporting requirements when Industry Member Broker 1 routes a simple option order to an Industry Member Floor Broker on the AMEROP Exchange for trading in Open Outcry. In this scenario, Broker 1 sends an order to the Floor Broker. The Floor Broker represents the trade in the crowd and a Market Maker takes the contra side. The Floor Broker agrees to the trade in open outcry and sends an order message to the AMEROP Exchange to confirm and execute the trade.
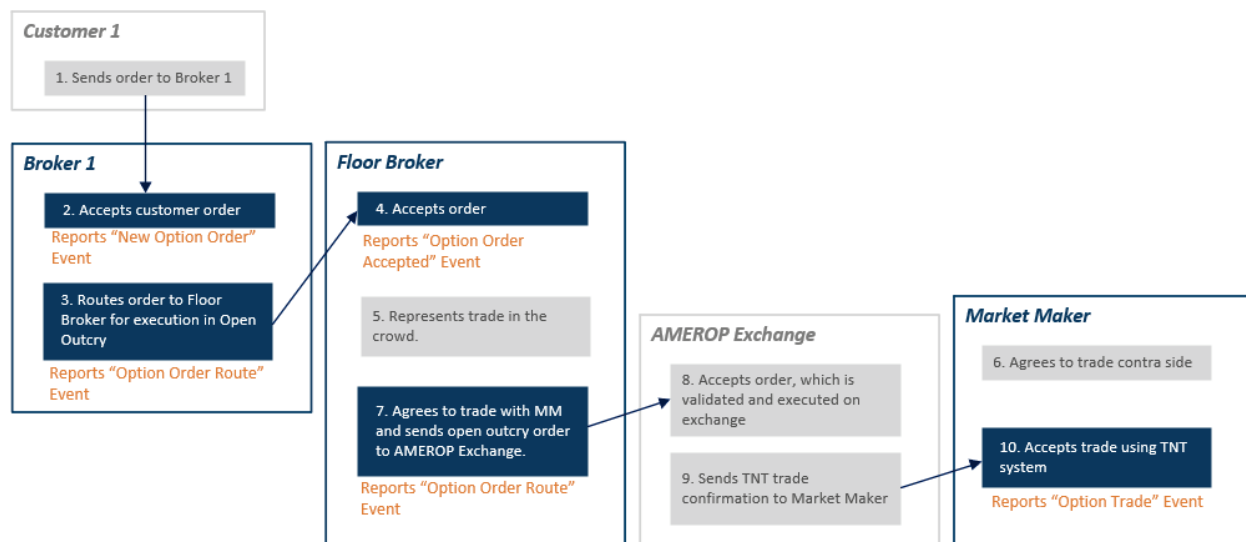
On the AMEROP Options exchange, Floor Broker open outcry trades are processed using Order Route messages to the exchange. The Exchange reports corresponding order accept messages and executes the floor trade against those orders. Note that Market Maker's verbal quote is not currently reportable to CAT (market maker verbal announcements of firm quotes on an exchange trading floor are subject to the SEC's November 12, 2020 order granting a temporary conditional exemption relating to the reporting of certain on and off floor activities until July 31, 2023). Market Maker is required to report a MOOT event to CAT reflecting their side of the execution.

Industry Member Broker 1 is required to report:

- The receipt of the simple option order from the Customer (Option New Order event)
- The route of the simple option order to Floor Broker (Option Order Route event)

Industry Member Floor Broker is required to report:

- The receipt of the option order from Broker 1 (Option Order Accepted event)
- The initial side open outcry order sent to the exchange (Option Order Route event)

Industry Member Market Maker is required to report:

- The open outcry TNT trade for the contra side (Option Trade event)

AMEROP 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 simple option order to Broker 1	*N/A*	
2	Broker 1 accepts the customer option order	Broker 1 reports a **New Option Order event** type: MONO orderKeyDate: 20210630T000000 orderID: O54321 optionID: ABCD 230616C00062500 eventTimestamp: 20210630T110512.123456 manualFlag; false electronicDupFlag: false deptType: A side: S price: 1.25 quantity: 35 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG firmDesignatedID: CUS555 accountHolderType: A affiliateFlag: false solicitationFlag: false openCloseIndicator: Close representativeInd: N	
3	Broker 1 routes the option order to Floor Broker	Broker 1 reports an **Option Order Route event** type: MOOR orderKeyDate: 20210630T000000 orderID: O54321 optionID: ABCD 230616C00062500 eventTimestamp: 20210630T110513.112233 manualFlag: false electronicDupFlag: false senderIMID: 123:BRKR01 destination: 456:FBRKR destinationType: F routedOrderID: RT66 side: S price: 1.25	

#	Step	Reported Event	Comments
		quantity: 35 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG handlingInstructions: RAR affiliateFlag: false multiLegInd false openCloseIndicator: Close	
4	Floor Broker accepts the option order from Broker 1	*Floor Broker reports an **Option Order Accepted event*** type: MOOA orderKeyDate: 20210630T000000 orderID: FBO-S-20210630_001 optionID: ABCD 230616C00062500 eventTimestamp: 20210630T110513.122334 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F routedOrderID: RT66 deptType: T side: S price: 1.25 quantity: 35 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG affiliateFlag: false solicitationFlag: false openCloseIndicator: Open	
5	Floor Broker represents the order to the trading crowd on the AMEROP exchange floor	*N/A*	
6	Market Maker agrees to trade the contra side of the order	*N/A*	Per the SEC order, Market Maker has no obligation to report his verbal quote response.
7	Floor Broker agrees to trade and enters an order for exchange execution of the floor trade	*Floor Broker reports an **Option Order Route event*** type: MOOR orderKeyDate: 20210630T000000 orderID: FBO-S-20210630_001	

| #	Step	Reported Event	Comments
		optionID: ABCD 230616C00062500 eventTimestamp: 20210630T110513.112233 manualFlag: false electronicDupFlag: false senderIMID: 456:FBRKR destination: AMEROP destinationType: E routedOrderID: RT68 session: AM-123 side: S price: 1.25 quantity: 35 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: C affiliateFlag: false multiLegInd false openCloseIndicator: Close	
8	AMEROP Exchange accepts order and processes the floor trade.	*AMEROP Exchange reports a Participant **Option Order Accepted** event and a Participant **Option Trade event***	
9	AMEROP Exchange sends TNT trade confirmation to Market Maker	*N/A*	
10	Market Maker accepts trade	*Market Maker reports an **Option Trade** event* type: MOOT tradeKeyDate: 20210630T000000 tradeID: TRD001 optionID: ABCD 230616C00062500 eventTimestamp: 20210630T110514 manualFlag: true cancelFlag: false quantity: 35 price: 1.25 capacity: P tapeTradeID: 77777 sideDetailsInd: BUY buyDetails: orderKeyDate: orderID:	Market Maker 1 reports a single-sided MOOT event, representing its side of the trade, with the *firmDesignatedID* populated. The *tapeTradeID* field is used to link to the Trade event reported to CAT by the Exchange.

#	Step	Reported Event	Comments
		side: B firmDesignatedID: MM-1248 accountHolderType: O marketCenterID: AMEROP multiLegInd: false	

8.5.2. AMEROP Options Floor Broker Receives Offsetting Orders for Crossing in Open Outcry (no market interference)

This scenario illustrates the CAT reporting requirements when Industry Member Broker 1 routes two offsetting simple option orders to an Industry Member Floor Broker on the AMEROP Exchange for trading in Open Outcry. In this scenario, Broker 1 routes two offsetting orders to the Floor Broker. The Floor Broker represents the order in the crowd and there is no market interest, so the Floor Broker sends offsetting open outcry orders to the Exchange to confirm and execute the trade.
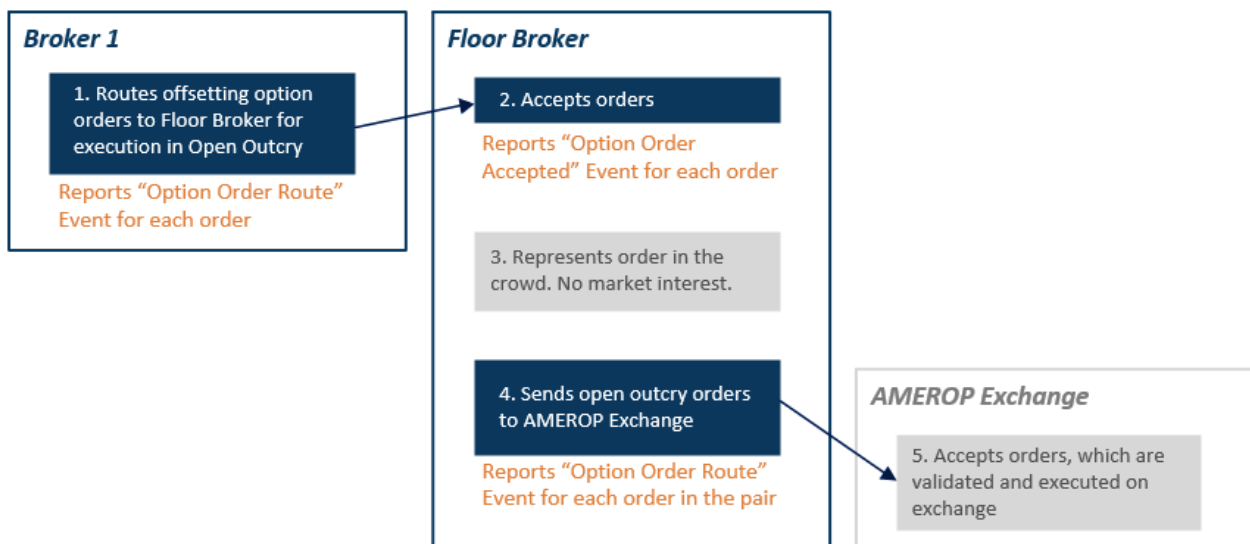
For illustration purposes, this scenario begins with the route of two offsetting orders by Broker 1 to the AMEROP Floor Broker. The reporting requirements for one possible workflow leading up to the paired orders can be found in 3.7.4 (Steps 1 – 7).

On the AMEROP Options exchange, Floor Broker open outcry trades are processed using Order Route messages on the initial and contra sides to the exchange system. The Exchange reports corresponding order accept messages and executes the floor trade against those orders.

Industry Member Broker 1 is required to report:

- The route of the orders to Floor Broker (Option Order Route events)

Industry Member Floor Broker is required to report:

- The receipt of the orders from Broker 1 (Option Order Accepted events)
- The route of the initial and contra side open outcry orders to the exchange system (Option Order Route events)

AMEROP Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Broker 1 routes two offsetting order to Floor Broker for execution in open outcry	*Broker 1 reports an **Option Order Route event** (1/2)* type: MOOR orderKeyDate: 20210630T000000 orderID: O12345 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101527.6125 manualFlag: false electronicDupFlag: false senderIMID: 123:BRKR01 destination: 456:FBRKR destinationType: F routedOrderID: B1RT01 side: S price: 3.25 quantity: 45 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: C affiliateFlag: false multiLegInd false openCloseIndicator: Close *Broker 1 reports an **Option Order Route event** (2/2)* type: MOOR orderKeyDate: 20210630T000000 orderID: O12346 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101528.4412 manualFlag: false electronicDupFlag: false senderIMID: 123:BRKR01 destination: 456:FBRKR destinationType: F	

#	Step	Reported Event	Comments
		routedOrderID: B1RT02 side: B price: 3.25 quantity: 45 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: F affiliateFlag: false multiLegInd false openCloseIndicator: Open	
2	Floor Broker accepts the simple option orders from Broker 1	*Floor Broker reports an **Option Order Accepted** event (1/2)* type: MOOA orderKeyDate: 20210630T000000 orderID: FBO-S-20210630_002 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101527.8357 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F routedOrderID: B1RT01 deptType: T side: S price: 3.25 quantity: 45 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG affiliateFlag: false openCloseIndicator: Close *Floor Broker reports an **Option Order Accepted** event (2/2)* type: MOOA orderKeyDate: 20210630T000000 orderID: FBO-B-20210630_002 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101528.6245 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F	

#	Step	Reported Event	Comments
		routedOrderID: B1RT02 deptType: T side: B price: 3.25 quantity: 45 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG affiliateFlag: false openCloseIndicator: Open	
3	Floor Broker represents order in the crowd	*N/A*	
4	Floor Broker sends orders to AMEROP Options Exchange	*Floor Broker reports an **Option Order Route event** for the initial side of the outcry trade (1/2)* type: MOOR orderKeyDate: 20210630T000000 orderID: FBO-S-20210630_002 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101528.6543 manualFlag: false electronicDupFlag: false senderIMID: 456:FBRKR destination: AMEROP destinationType: E routedOrderID: RT66 session: AM-123 side: S price: 3.25 quantity: 45 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: C affiliateFlag: false multiLegInd false openCloseIndicator: Close *Floor Broker reports an **Option Order Route event** for the contra side of the outcry trade (2/2)* type: MOOR	.

#	Step	Reported Event	Comments
		orderKeyDate: 20210630T000000 orderID: FBO-B-20210630_002 optionID: ABCD 220121C00062500 eventTimestamp: 20210630T101529.8523 manualFlag: false electronicDupFlag: false senderIMID: 456:FBRKR destination: AMEROP destinationType: E routedOrderID: RT67 session: AM-123 side: B price: 3.25 quantity: 45 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: F affiliateFlag: false multiLegInd false openCloseIndicator: Open	
5	AMEROP Options exchange accepts the orders and executes the open outcry trade.	*Exchange reports a Participant **Option Order Accepted event** and a Participant **Option Trade event** for each open outcry trade.*	

8.5.3. AMEROP Options Floor Broker Receives Offsetting Order for Crossing in Open Outcry (Floor Market Maker takes partial contra side)

This scenario illustrates the CAT reporting requirements when Industry Member Broker 1 routes two offsetting option orders to an Industry Member Floor Broker to cross on the AMEROP Exchange, and a Market Maker breaks the cross.

In this scenario, Broker 1 routes two offsetting orders to the Floor Broker. The Floor Broker represents the order in the crowd and a Floor Market Maker elects to participate in the cross for a partial quantity on the contra side. The Floor Broker sends one order on the initial side for the Market Maker partial quantity and two additional offsetting orders (initial and contra sides) for the balance remaining to the AMEROP Exchange to confirm and execute the trades.

Broker 1

1. Routes offsetting option orders to Floor Broker for execution in Open Outcry

Reports "Option Order Route" Event for each order

Floor Broker

2. Accepts option orders

Reports "Option Order Accepted" Event for each order

3. Represents order in the crowd.

4. Agrees to trade and sends open outcry orders to AMEROP Exchange

Reports "Option Order Route" Event for executed quantities.

AMEROP Exchange

5. Open outcry orders received by AMEROP, which are validated and executed on exchange

6. Trade notification is sent to Market Maker for their partial quantity

Market Maker

7. Agrees to trade partial quantity on contra side

8. Accepts trade using AMEROP TNT system

Reports "Option Trade" Event for partial quantity traded

For illustration purposes, this scenario begins with the route of two offsetting orders by Broker 1 to the AMEROP Floor Broker. The reporting requirements for one possible workflow leading up to the paired orders can be found in 3.7.4 (Steps 1 – 7).

On the AMEROP Options exchange, Floor Broker open outcry trades are processed using Order Route messages on the initial and contra sides to the exchange system. The Exchange reports corresponding order accept messages and executes the floor trade against those orders. Note that Market Maker's verbal quote is not currently reportable to CAT (market maker verbal announcements of firm quotes on an exchange trading floor are subject to the SEC's November 12, 2020 order granting a temporary conditional exemption relating to the reporting of certain on and off floor activities until July 31, 2023). Market Maker is required to report a MOOT event to CAT reflecting their side of the execution.

Industry Member Broker 1 is required to report:

- The route of the orders to Floor Broker (Option Order Route events)

Industry Member Floor Broker is required to report:

- The receipt of the simple option orders from Broker 1 (Option Order Accepted events)
- The route of the open outcry orders (35 contracts and 25 contracts) for the initial side order of 60 total contracts (Option Order Route events)
- The route of the open outcry order for the contra order of 35 contracts (Option Order Route event)

Industry Member Market Maker is required to report:

- The open outcry TNT trade for 25 contracts executed by Floor Broker on the AMEROP Exchange (Option Trade event)

AMEROP Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Broker 1 routes two offsetting simple option order to Floor Broker	*Broker 1 reports an* **Option Order Route** *event (1/2)* type: MOOR orderKeyDate: 20210630T000000 orderID: O12350 optionID: XYZ 230916P00015000 eventTimestamp: 20210630T1455.101010 manualFlag: false electronicDupFlag: false senderIMID: 123:BRKR01 destination: 456:FBRKR destinationType: F routedOrderID: BRT-3434 side: B price: 0.40 quantity: 60 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: C affiliateFlag: false multiLegInd false openCloseIndicator: Close *Broker 1 reports an* **Option Order Route** *event (2/2)* type: MOOR orderKeyDate: 20210630T000000 orderID: O12354 optionID: XYZ 230916P00015000 eventTimestamp: 20210630T1457.112233 manualFlag: false electronicDupFlag: false senderIMID: 123:BRKR01 destination: 456:FBRKR destinationType: F routedOrderID: BRT-3435 side: S price: 0.40 quantity: 60 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG	

#	Step	Reported Event	Comments
		routeRejectedFlag: false exchOriginCode: F affiliateFlag: false multiLegInd false openCloseIndicator: Open	
2	Floor Broker accepts the paired simple option orders from Broker 1	*Floor Broker reports an* **Option Order Accepted event** *(1/2)* type: MOOA orderKeyDate: 20210630T000000 orderID: FBO-B-20210630_003 optionID: XYZ 230916P00015000 eventTimestamp: 20210630T1455.123456 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F routedOrderID: BRT-3434 deptType: T side: B price: 0.40 quantity: 60 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG affiliateFlag: false openCloseIndicator: Close *Floor Broker reports an* **Option Order Accepted event** *(2/2)* type: MOOA orderKeyDate: 20210630T000000 orderID: FBO-S-20210630_003 optionID: XYZ 230916P00015000 eventTimestamp: 20210630T1457.235689 receiverIMID: 456:FBRKR senderIMID: 123:BRKR01 senderType: F routedOrderID: BRT-3435 deptType: T side: S price: 0.40 quantity: 60 orderType: LMT timeInForce: DAY=20210630	

#	Step	Reported Event	Comments
		tradingSession: REG affiliateFlag: false openCloseIndicator: Open	
3	Floor Broker represents order in the crowd	*N/A*	
4	Market Maker verbally agrees to trade partial contra quantity	*N/A*	Per the SEC order, Market Maker has no obligation to report his verbal quote response.
5	Floor Broker agrees to trade, and routes open outcry orders to AMEROP Exchange	*Floor Broker reports an **Option Order Route event** for initial side partial open outcry trade (1/3)* type: MOOR orderKeyDate: 20210630T000000 orderID: FBO-B-20210630_003 optionID: XYZ 230916P00015000 eventTimestamp: 20210630T1458.123456 manualFlag: false electronicDupFlag: false senderIMID: 456:FBRKR destination: AMEROP destinationType: E routedOrderID: RT100 session: AM-123 side: B price: 0.40 quantity: 25 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: C affiliateFlag: false multiLegInd false openCloseIndicator: Close *Floor Broker reports an **Option Order Route event** for initial side partial open outcry trade (2/3)* type: MOOR orderKeyDate: 20210630T000000 orderID: FBO-B-20210630_003 optionID: XYZ 230916P00015000	

| #	Step	Reported Event	Comments
		eventTimestamp: 20210630T1459.456123 manualFlag: false electronicDupFlag: false senderIMID: 456:FBRKR destination: AMEROP destinationType: E routedOrderID: RT101 session: AM-123 side: B price: 0.40 quantity: 35 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: C affiliateFlag: false multiLegInd false openCloseIndicator: Close *Floor Broker reports an **Option Order Route event** for contra side partial open outcry trade (3/3)* type: MOOR orderKeyDate: 20210630T000000 orderID: FBO-S-20210630_003 optionID: XYZ 230916P00015000 eventTimestamp: 20210630T1459.456123 manualFlag: false electronicDupFlag: false senderIMID: 456:FBRKR destination: AMEROP destinationType: E routedOrderID: RT102 session: AM-123 side: S price: 0.40 quantity: 35 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: F affiliateFlag: false multiLegInd false	

		openCloseIndicator: Open	
6	AMEROP Options exchange accepts the orders and executes the open outcry trade.	*Exchange reports a Participant **Option Order Accept event** and a Participant **Option Trade event** for each open outcry trade.*	
7	AMEROP exchange sends trade confirmation to Market Maker	*N/A*	

8	Market Maker confirms trade	*Market Maker reports an **Option Trade event** for the contra side partial open outcry trade*
		
		type: MOOT
		tradeKeyDate: 20210630T000000
		tradeID: TRD003
		  XYZ 230916P00015000
		eventTimestamp: 20210630T1459
		manualFlag: true
		cancelFlag: false
		quantity: 25
		price: 0.40
		capacity: P
		tapeTradeID: 74788
		sideDetailsInd: SELL
		sellDetails:
		  orderKeyDate:
		  orderID:
		  side: S
		  firmDesignatedID: MM-1248
		  accountHolderType: O
		marketCenterID: AMEROP
		multiLegInd: false
			Market Maker 1 reports a single-sided MOOT event, representing its side of the trade, with the *firmDesignatedID* populated. The *tapeTradeID* field is used to link to the Trade event reported to CAT by the Exchange.

8.5.4. AMEROP Options Floor Broker Receives Offsetting Multi-leg Orders with an Equity Leg for Crossing in Open Outcry (Floor Market Maker takes full contra side)

This scenario illustrates the CAT reporting requirements when Industry Member Broker 1 routes two offsetting multi-leg orders with an equity leg to an Industry Member Floor Broker on the AMEROP Exchange for trading in Open Outcry.

In this scenario, Broker 1 routes two offsetting multi-leg orders to the Floor Broker. The Floor Broker represents the order in the crowd and a Floor Market Maker elects to participate in the cross for the full quantity of the contra side. The Floor Broker agrees to trade and sends the open outcry orders for the option legs to the Exchange to confirm and execute the trades. The Floor Broker also routes the equity legs to Equity Broker 2 for crossing.
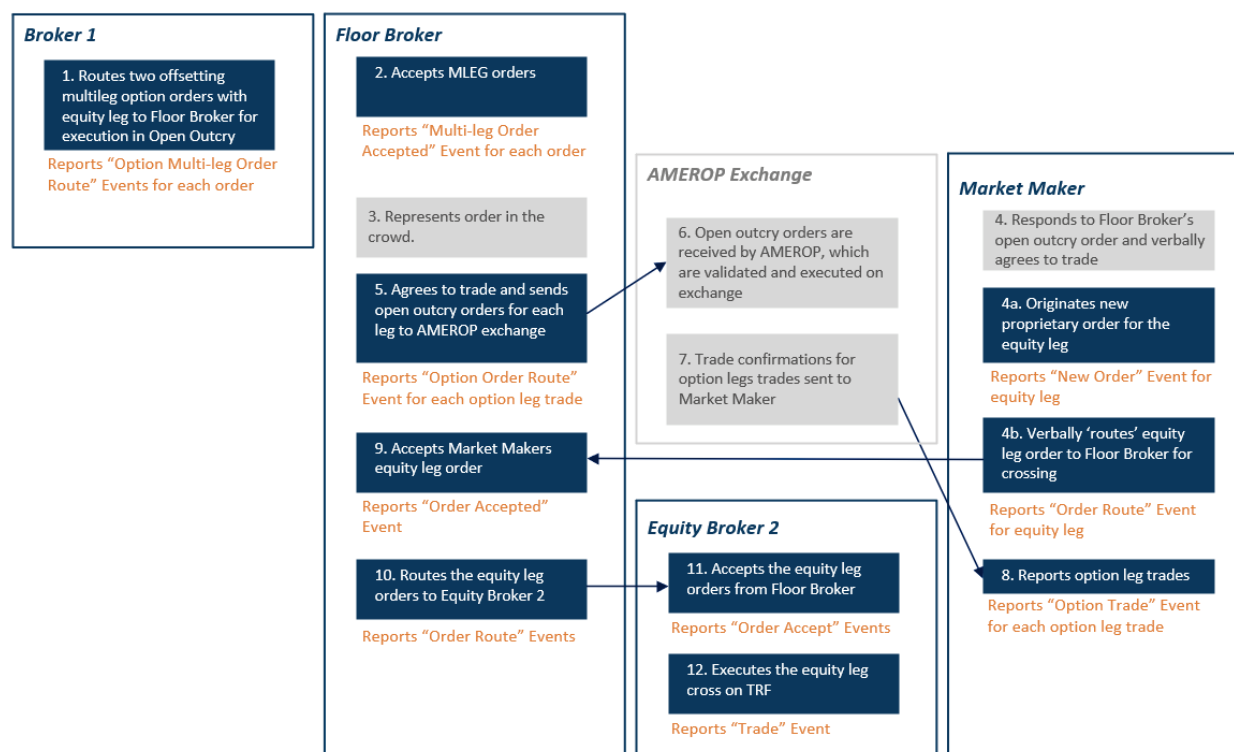
For illustration purposes, this scenario begins with the route of two offsetting orders to the AMEROP Floor Broker. The reporting requirements for one possible workflow leading up to the offsetting orders can be found in 3.6.6 (Steps 1 – 3)

Note that Market Maker's verbal quote for the option legs is not currently reportable to CAT (market maker verbal announcements of firm quotes on an exchange trading floor are subject to the SEC's November 12, 2020 order granting a temporary conditional exemption relating to the reporting of certain on and off floor activities until July 31, 2023). Market Maker is required to report a MOOT event to CAT reflecting their side of the execution for each option leg. Market Maker is also required to report the equity order origination (MENO event) and the route of that equity order for execution (MEOR event).

Industry Member Broker 1 is required to report:

- The route of the multi-leg orders to Floor Broker (Multi-leg Order Route events)

Industry Member Floor Broker is required to report:

- The receipt of the multi-leg orders from Broker 1 (Multi-leg Order Accepted events)

- The order routes for open outcry option leg trades for the initial side order (Option Order Route events)

- The receipt of the equity leg order from Market Maker (Order Accepted event)

- The route of the equity leg orders to Equity Broker 2 (Order Route events)

Industry Member Market Maker is required to report:

- The origination of the equity leg order (New Order event)

- The route of the equity order to Floor Broker (Order Route event)

- The open outcry trades executed by Floor Broker on the AMEROP Exchange (Option Trade events)

Industry Member Equity Broker 2 is required to report:

- The receipt of the equity leg orders from Floor Broker (Order Accepted events)

- The execution of the equity leg orders (Trade event)

AMEROP Options exchange is required to report as outlined in the CAT Reporting Technical Specifications for Plan Participants.

#	Step	Reported Event	Comments
1	Broker 1 routes two offsetting multileg option orders to Floor Broker	*Broker 1 reports a **Multi-Leg Order Route event** for each order* type: MLOR orderKeyDate: 20210630T000000 orderID: CO12345 underlying: XYZ eventTimestamp: 20210630T153038.223456 manualFlag: false senderIMID: 123:BRKA destination: FBRKR destinationType: F routedOrderID: RTO-99998 price: 16.35 quantity: 50 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000	

#	Step	Reported Event	Comments
		openCloseIndicator: Open side: S legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00035000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: B legRatioQuantity: 41 *Broker 1 reports a **Multi-Leg Order Route event (2/2)*** type: MLOR orderKeyDate: 20210630T000000 orderID: P222444 underlying: XYZ eventTimestamp: 20210630T153038.223456 manualFlag: false senderIMID: 123:BRKA destination: FBRKR destinationType: F routedOrderID: RTO-99999 price: -16.35 quantity: 50 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00035000 openCloseIndicator: Open side: S	

#	Step	Reported Event	Comments
		legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: SL legRatioQuantity: 41	
2	Floor Broker accepts the multi-leg orders from Broker 1	*Floor Broker reports a* **Multi-Leg Option Order Accepted event** type: MLOA orderKeyDate: 20210630T000000 orderID: FB-MLEG004 underlying: XYZ eventTimestamp: 20210630T153038.456123 manualFlag: false receiverIMID: 456:FBRKR senderIMID: 123:BRKA senderType: F routedOrderID: RTO-99998 price: 16.35 quantity: 50 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: S legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00035000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: B legRatioQuantity: 41 type: MLOA	

#	Step	Reported Event	Comments
		orderKeyDate: 20210630T000000 orderID: FBMLEG-005 underlying: XYZ eventTimestamp: 20210630T153038.456123 manualFlag: false receiverIMID: 456:FBRKR senderIMID: 123:BRKA senderType: F routedOrderID: RTO-99999 price: -16.35 quantity: 50 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG handlingInstructions: affiliateFlag: false numberOfLegs: 3 priceType: PU legDetails: legRefID: 1 optionID: XYZ 210810C00032000 openCloseIndicator: Open side: B legRatioQuantity: 1 legRefID: 2 optionID: XYZ 210810C00035000 openCloseIndicator: Open side: S legRatioQuantity: 1 legRefID: 3 symbol: XYZ side: SL legRatioQuantity: 41	
3	Floor Broker represents order in the crowd	*N/A*	
4	Market Maker verbally agrees to trade full contra quantity. This includes a verbal order and route for the equity leg.	*Market Maker reports a **New Order event** and an **Order Route event** for the equity leg.* type: MENO orderKeyDate: 20210630T000000 orderID: MM3456 eventTimestamp: 20210630T153037	While Market Maker 1 is not required to report the multi-leg verbal quote for the option legs. However, Market Maker 1 is required to report the origination of the equity leg order with a *handlingInstructions* value of 'OPT' to indicate that the order is an options related order.

#	Step	Reported Event	Comments
		manualFlag: true electronicTimestamp: deptType: T side: SL price: 29.75 quantity: 2,050 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG handlingInstructions: OPT firmDesignatedID: MM-1248 accountHolderType: O affiliateFlag: false representativeInd: N type: MEOR orderKeyDate: 20210630T000000 orderID: MM3456 symbol: XYZ eventTimestamp: 20210630T153037 manualFlag: true senderIMID: 555:MM1 destination: 456:FBRKR destinationType: F routedOrderID: side: SL price: 29.75 quantity: 2050 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: OPT multiLegInd: false	Market Maker 1 is also required to report an order route event for the verbal equity leg order given to Floor Broker. The *multiLegInd* field must be 'false' on the MEOR event, as the immediately preceding event is a simple equity event, not a multi-leg event. If the *multiLegInd* field is populated as 'true', the firm will receive an intrafirm linkage error, as this field is used to determine if the event will link to a multi-leg event or a simple equity/option event. The *routedOrderID* field is not required for manual routes.
5	Floor Broker agrees to trade and sends open outcry orders to the AMEROP exchange	*Floor Broker reports an **Option Order Route event** for each open outcry trade* type: MOOR (Initial Side Leg 1) orderKeyDate: 20210630T000000 orderID: FB-MLEG004 optionID: XYZ 210810C00032000 eventTimestamp: 20210630T1458.123456 manualFlag: false electronicDupFlag: false senderIMID: 456:FBRKR	AMEROP requires a single option open outcry order for each leg. Each leg level MOOR event must include the *orderID* of the MLOA event. The *multiLegInd* must be populated as 'true' to indicate that the immediately preceding event in the order life cycle is a Multi-Leg order event.

#	Step	Reported Event	Comments
		destination: AMEROP destinationType: E routedOrderID: RTML7755-1 session: AM-123 side: S price: 1.10 quantity: 50 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: C affiliateFlag: false multiLegInd true openCloseIndicator: Open type: MOOR (Initial Side Leg 2) orderKeyDate: 20210630T000000 orderID: FB-MLEG004 optionID: XYZ 210810C00035000 eventTimestamp: 20210630T150153.123456 manualFlag: false electronicDupFlag: false senderIMID: 456:FBRKR destination: AMEROP destinationType: E routedOrderID: RTML7755-2 session: AM-123 side: B price: 2.05 quantity: 50 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG routeRejectedFlag: false exchOriginCode: C affiliateFlag: false multiLegInd true openCloseIndicator: Open	
9	AMEROP Options exchange accepts orders and executes the open outcry trades.	*Exchange reports a Participant **Option Order Accept event** and a Participant **Order Trade event** for each open outcry trade.*	

#	Step	Reported Event	Comments
10	AMEROP sends trade confirmation to Market Maker	*N/A*	
11	Market Maker confirms trade	*Market Maker reports an* **Option Trade event** *for each option leg.* type: MOOT (Leg 1 contra side) tradeKeyDate: 20210630T000000 tradeID: MMTD201 optionID: XYZ 210810C00032000 eventTimestamp: 20210630T133045 manualFlag: true cancelFlag: false quantity: 50 price: 1.10 capacity: P tapeTradeID: 60613 sideDetailsInd: BUY buyDetails: orderKeyDate: orderID: side: B firmDesignatedID:MM-1248 accountHolderType: O marketCenterID: AMEROP multiLegInd: true type: MOOT (Leg 2 contra side) tradeKeyDate: 20210630T000000 tradeID: MMTD202 optionID: XYZ 210810C00035000 eventTimestamp: 20210630T133045 manualFlag: true cancelFlag: false quantity: 50 price: 2.05 capacity: P tapeTradeID: 60614 sideDetailsInd: SELL sellDetails: orderKeyDate: orderID: side: S firmDesignatedID: MM-1248 accountHolderType: O marketCenterID: AMEROP multiLegInd: true	Market Maker 1 reports a single-sided MOOT event, representing its side of the trade, with the *firmDesignatedID* and *accountHolderType* fields populated. The *multiLegInd* field must be populated as 'true' to indicate that the trades are for a multileg order. The *tapeTradeID* field is used to link to the Trade event reported to CAT by the Exchange.

#	Step	Reported Event	Comments
12	Floor Broker accepts the Market Maker's equity order	*Floor Broker reports an **Order Accept event** for the equity leg* type: MEOA orderKeyDate: 20210630T000000 orderID: FB-ORD123 symbol: XYZ eventTimestamp: 20210630T153037 manualFlag: true electronicTimestamp: 20210630T153039.853456 receiverIMID: 456:FBRKR senderIMID: 444:MM1 senderType: F routedOrderID: affiliateFlag: false deptType: T side: SL price: 29.75 quantity: 2050 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	
13	Floor Broker routes the equity leg orders to Equity Broker 2 for execution.	*Floor Broker reports an **Order Route event** for each of the equity leg orders* type: MEOR orderKeyDate: 20210630T000000 orderID: FB-MLEG004 symbol: XYZ eventTimestamp: 20210630T153037 manualFlag: true senderIMID: 456:FBRKR destination: 789:BRK2 destinationType: F routedOrderID: side: B price: 29.75 quantity: 2050 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG affiliateFlag: false isoInd: NA	

#	Step	Reported Event	Comments
		handlingInstructions: OPT multiLegInd: true type: MEOR orderKeyDate: 20210630T000000 orderID: FB-ORD123 symbol: XYZ eventTimestamp: 20210630T153037 manualFlag: true senderIMID: 456:FBRKR destination: 789:BRK2 destinationType: F routedOrderID: side: S price: 29.75 quantity: 2050 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG affiliateFlag: false isoInd: NA handlingInstructions: OPT multiLegInd: false	
14	Equity Broker 2 accepts the equity leg orders from Floor Broker	*Equity Broker 2 reports an **Order Accept event** for each equity leg order* type: MEOA orderKeyDate: 20210630T000000 orderID: EQB123-B symbol: XYZ eventTimestamp: 20210630T153037 manualFlag: true receiverIMID: 789:BRK2 senderIMID: 456:FBRKR senderType: F routedOrderID: affiliateFlag: false deptType: T side: B price: 29.75 quantity: 2050 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	

| #	Step	Reported Event	Comments
		type: MEOA orderKeyDate: 20210630T000000 orderID: EQB123-S symbol: XYZ eventTimestamp: 20210630T153037 manualFlag: true receiverIMID: 789:BRK2 senderIMID: 456:FBRKR senderType: F routedOrderID: affiliateFlag: false deptType: T side: SL price: 29.75 quantity: 2050 orderType: LMT timeInForce: DAY=20210630 tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	
15	Equity Broker 2 crosses the orders	*Equity Broker 2 reports a **Trade event*** type: MEOT tradeKeyDate: 20210630T000000 tradeID: TX-XYZ124 symbol: XYZ eventTimestamp: 20210630T153356. 234561 manualFlag: false cancelFlag: false cancelTimestamp: quantity: 2050 price: 29.50 capacity: A tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20210630T000000 orderID: EQB123-B side: B sellDetails: orderKeyDate: 20210630T000000 orderID: EQB123-S side: SL	

9. TRF Scenarios

9.1.1. 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, then the Industry Member must submit a 'COR' event to capture these fields.
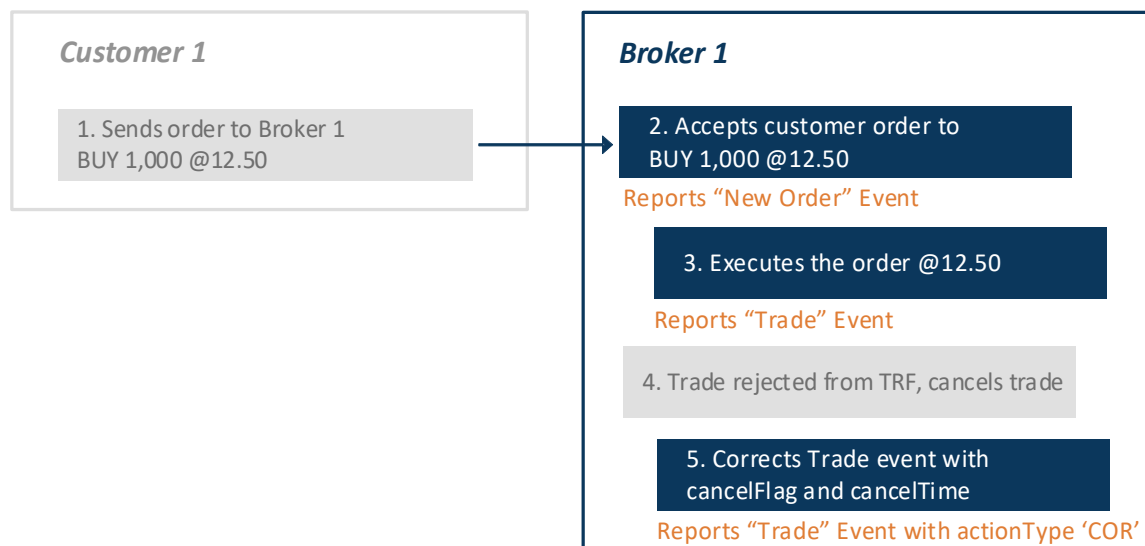
Industry Member Broker 1 is required to report:

- 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: T side: B price: 12.50 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:	

| #	Step	Reported Event	Comments
		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 *cancelTimestamp* values	*Broker 1 reports a **Trade event*** actionType: COR 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	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
		firmDesignatedID: PROP123 accountHolderType: P	

9.1.2. Trade is Updated at the Trade Reporting Facility Using the Same Compliance ID or FINRA Control Number

This scenario illustrates the CAT reporting requirements when an Industry Member corrects a trade without canceling the original trade report. Instead, the Industry Member submits a corrected trade report to the relevant trade reporting facility and reuses the Compliance ID or FINRA Control Number from the original trade report.

In this scenario, an Industry Member executes a trade for 1,000 shares and correctly reports the MEOT event to CAT for 1,000 shares, but incorrectly reports the trade report to a trade reporting facility for 100 shares. The relevant trade reporting facility allows for corrections of trade reports without canceling the original trade report and will link the corrected trade report by referencing the Compliance ID or FINRA Control Number of the original trade report.

The Industry Member corrects the trade report to 1,000 shares without canceling the original trade report, and the Compliance ID or FINRA Control Number on the corrected trade report remains the same as the Compliance ID or FINRA Control Number on the original trade report.
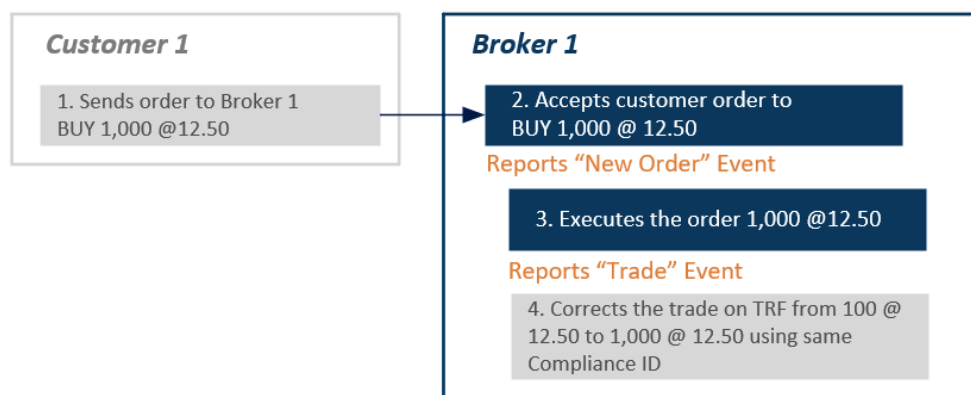
Industry Member Broker 1 is required to report:

- The receipt of the customer/client order (New Order event)
- The execution of the customer/client order (Trade event linking to original trade report)

In this scenario, the Industry Member is required to report only a single MEOT event to CAT which will directly link to the original trade report through the *tapeTradeID* field, and will link by reference to the updated trade report which used the same Compliance ID or FINRA Control Number. Broker 1 must not submit a separate MEOT event to CAT reflecting the corrected trade report in this scenario.

If the Trade Reporting facility allows for corrections of trade reports without canceling the original trade report, but Broker 1 still chooses to cancel the original trade report, Broker 1 must follow the guidance outlined in Scenarios 9.1.3 and 9.1.4.

#	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: T side: B price: 12.50 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	In its Trade event, Broker 1 must populate the *tapeTradeID* field linking to the initially reported trade report with an incorrect shares quantity of 100. The *cancelFlag* must be populated as 'false'.

#	Step	Reported Event	Comments
		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 corrects the trade report to correctly reflect 1,000 shares and uses the same Compliance ID or FINRA Control Number from the original trade report	*NA*	In its updated Trade report to the FINRA Facility, Broker 1 populates the Compliance ID or FINRA Control Number = TRF123, which will link it to the initially submitted trade report with the incorrect quantity of 100, and will link by reference to the MEOT event that was already correctly submitted to CAT.

9.1.3. Trade is Cancelled at the Trade Reporting Facility and a New Trade is Reported Using the Same Compliance ID or FINRA Control Number

This scenario illustrates the CAT reporting requirements when an Industry Member cancels a trade at a trade reporting facility and reuses the Compliance ID or FINRA Control Number from the original trade report.

In this scenario, an Industry Member executes a trade for 1,000 shares and correctly reports the MEOT event to CAT for 1,000 shares, but incorrectly reports the trade report to a trade reporting facility for 100 shares. The Industry Member cancels the original trade report for 100 shares and submits a new trade report for 1,000 shares, and the Compliance ID or FINRA Control Number on the new trade report remains the same as the Compliance ID or FINRA Control Number on the original trade report.
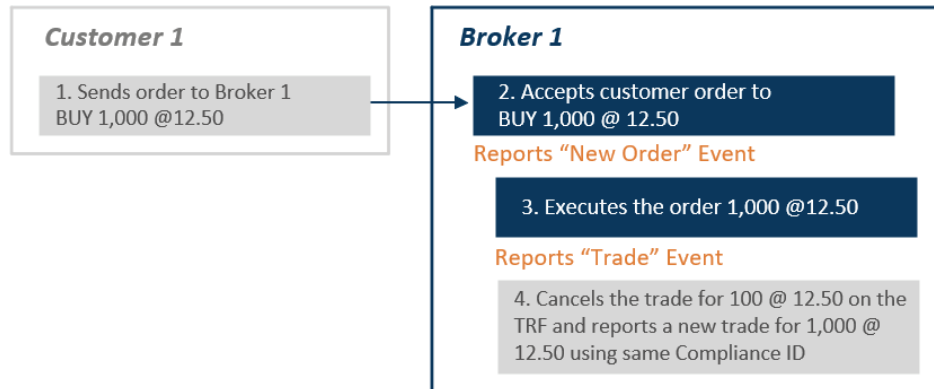
Industry Member Broker 1 is required to report:

- The receipt of the customer/client order (New Order event)
- The execution of the customer/client order (Trade event linking to both trade reports)

In this scenario, the Industry Member is required to report only a single MEOT event to CAT which will directly link to the both trade reports through the *tapeTradeID* field. Broker 1 must not submit a separate MEOT event to CAT reflecting the corrected trade report in this scenario.

#	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: T side: B price: 12.50 quantity: 1000 orderType: LMT timeInForce: DAY=20180417 tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1234	

#	Step	Reported Event	Comments
		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	In its Trade event, Broker 1 must populate the *tapeTradeID* field with the identifier used in both the original and the new trade report. The *cancelFlag* must be populated as 'false'.
4	Broker 1 cancels the trade report for 100 shares and reports a new trade report to reflect 1,000 shares and uses the same Compliance ID or FINRA Control Number from the original trade report	*NA*	In its new Trade report to the FINRA Facility, Broker 1 populates the Compliance ID or FINRA Control Number = TRF123 which will link to the MEOT event that was already correctly submitted to CAT.

9.1.4. Trade is Cancelled at the Trade Reporting Facility and a New Trade is Reported Using a New Compliance ID or FINRA Control Number

This scenario illustrates the CAT reporting requirements when an Industry Member cancels a trade at a trade reporting facility and reports a new trade report with a new Compliance ID or FINRA Control Number than the original trade report.

In this scenario, an Industry Member executes a trade for 1,000 shares and correctly reports the MEOT event to CAT for 1,000 shares, but incorrectly reports the trade report to a trade reporting facility for 100 shares. The Industry Member cancels the original trade report for 100 shares and submits a new trade report for 1,000 shares, but uses a different Compliance ID or FINRA Control Number on the new trade report.
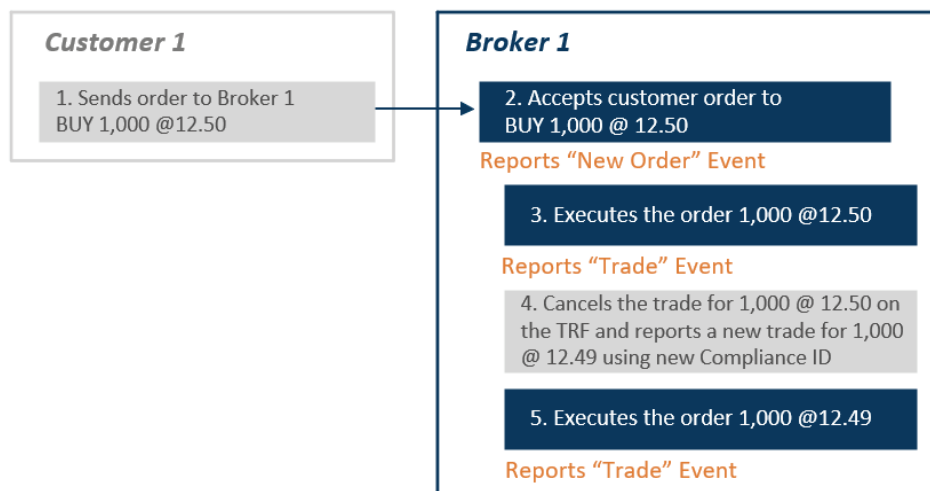
Industry Member Broker 1 is required to report:

- The receipt of the customer/client order (New Order event)
- The execution of the customer/client order (Trade event linking to the original trade report and Trade event linking to the new trade report)

In this scenario, since a new Compliance ID or FINRA Control Number was used, the Industry Member is required to report to CAT an MEOT event linking to the original trade report, and an MEOT event linking to the new trade report.

#	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	

| #	Step	Reported Event	Comments
		type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false cancelFlag: false cancelTimestamp: deptType: T side: B price: 12.50 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	In its Trade event, Broker 1 must populate the *tapeTradeID* field linking to the initially reported trade report with an incorrect price of 12.50. The *cancelFlag* must be populated as 'false'.

#	Step	Reported Event	Comments

		side: B
		sellDetails:
		    side: SL
		    firmDesignatedID: PROP123
		    accountHolderType: P	

4	Broker 1 cancels the trade report for 1000 shares with incorrect price and reports a new trade report to reflect correct price, and uses a brand new Compliance ID or FINRA Control Number	*NA*	In its new Trade report to the FINRA Facility, Broker 1 populates the Compliance ID or FINRA Control Number = TRF456, which will link it to the new MEOT event submitted to CAT.

5	Broker 1 reports a new MEOT to reflect price 12.49.	*Broker 1 reports a **Trade event***
		
		actionType: NEW
		firmROEID: 20180417_ M12370
		CATReporterIMID: BRK1
		type: MEOT
		tradeKeyDate: 20180417T000000
		tradeID: TXYZ555
		symbol: XYZ
		eventTimestamp:
		20180417T153036.834456
		manualFlag: false
		cancelFlag: false
		cancelTimestamp:
		quantity: 1000
		price: 12.49
		capacity: P
		tapeTradeID: TRF456
		marketCenterID: DN
		sideDetailsInd: NA
		buyDetails:
		    orderKeyDate:
		    20180417T000000
		    orderID: O11111
		    side: B
		sellDetails:
		    side: SL
		    firmDesignatedID: PROP123
		    accountHolderType: P
			In its new Trade event, Broker 1 must populate the *tapeTradeID* field linking to the newly reported trade report with correct price of 12.49.
			
			The *cancelFlag* must be populated as 'false'.

9.1.5. Trade is Incorrectly Reported to both CAT and to the Trade Reporting Facility

This scenario illustrates the CAT reporting requirements when an Industry Member incorrectly reports a trade to both CAT and a trade reporting facility. The Industry Member corrects its MEOT event in CAT, and the Industry Member submits a new trade report to the relevant trade reporting facility and uses a new Compliance ID or FINRA Control Number.

In this scenario, an Industry Member executes a trade for 1,000 shares and incorrectly reports both the MEOT event to CAT and the trade report to a trade reporting facility for 100 shares. The Industry Member corrects the MEOT event in CAT from 100 shares to 1,000 shares using a 'COR' event. The Industry Member submits a new trade report from 100 shares to 1,000 shares using a new Compliance ID or FINRA Control Number.
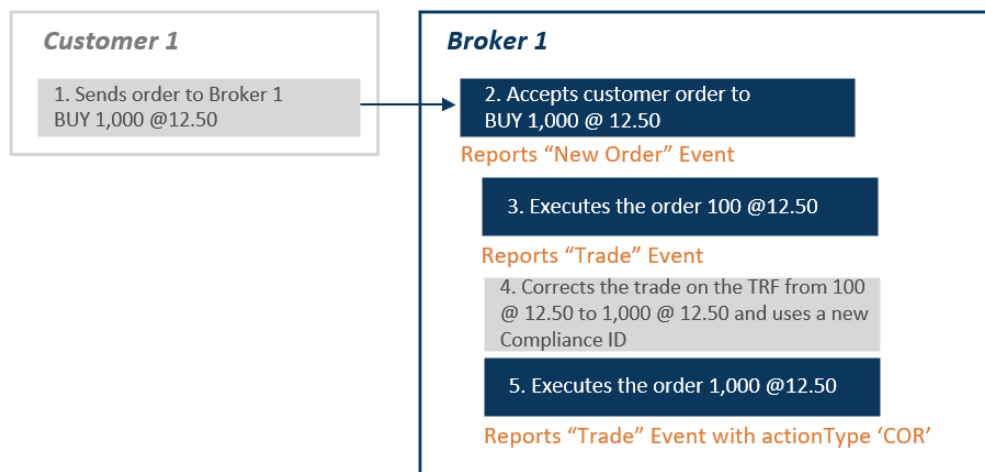
Industry Member Broker 1 is required to report:

- The receipt of the customer/client order (New Order event)
- The execution of the customer/client order (original Trade event linking to original TRF report and corrected Trade event linking to the new TRF report)

In this scenario, since a new Compliance ID or FINRA Control Number was used, the Industry Member is required to report to CAT a corrected MEOT event linking the new trade report. If a new Compliance ID or FINRA Control Number was not used, the corrected MEOT event would link to the original trade report by reference to the updated trade report which used the same Compliance ID or FINRA Control Number.

#	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
		actionType: NEW firmROEID: 20180417_ M12360 type: MENO CATReporterIMID: BRK1 orderKeyDate: 20180417T000000 orderID: O11111 symbol: XYZ eventTimestamp: 20180417T153035.234456 manualFlag: false cancelFlag: false cancelTimestamp: deptType: T side: B price: 12.50 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: 100 price: 12.50 capacity: P tapeTradeID: TRF123 marketCenterID: DN sideDetailsInd: NA buyDetails:	In its Trade event, Broker 1 must populate the *tapeTradeID* field linking to the initially reported trade report with an incorrect shares quantity of 100.

#	Step	Reported Event	Comments
		orderKeyDate: 20180417T000000 orderID: O11111 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	
4	Broker 1 corrects the trade report to correctly reflect 1,000 shares and uses a new Compliance ID or FINRA Control Number	*NA*	In its updated Trade report to the FINRA Facility, Broker 1 populates the Compliance ID or FINRA Control Number = TRF345, which will link it to the corrected MEOT event submitted to CAT.
5	Broker 1 reports a correction to MEOT to reflect 1000 shares	*Broker 1 reports a **Trade event*** actionType: COR 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: TRF345 marketCenterID: DN sideDetailsInd: NA buyDetails: orderKeyDate: 20180417T000000 orderID: O11111 side: B sellDetails: side: SL firmDesignatedID: PROP123 accountHolderType: P	In its corrected Trade event, Broker 1 must populate the *tapeTradeID* field linking to the corrected trade report with the correct shares quantity of 1000. Broker 1 must report the correct shares quantity of 1000 in its corrected MEOT. The *cancelFlag* field must be populated as 'false'.