CAT Industry Member Reporting Scenarios

(For IM Technical Specification v1.1)

2/28/19

DRAFT Version 1.1

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Executive Summary

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

The reporting scenarios are presented in a separated 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 evolves. It is expected that changes and additions will be necessary for reporting scenarios with greater frequency than changes to the Technical Specifications that would be required when record format, field value changes, etc., occur. By maintaining a separate reporting scenarios document, reporting scenarios may be clarified or added without the need for a new version of the Technical Specifications.

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

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

Revision / Change Process

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

1. 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.

2. Equity Scenarios and Examples

This section will illustrate sample equity reporting scenarios. Each scenario will include a brief scenario description including the reportable order events, a flow chart, and step-by-step reporting responsibilities.

2.1. Order Origination and Route Scenarios

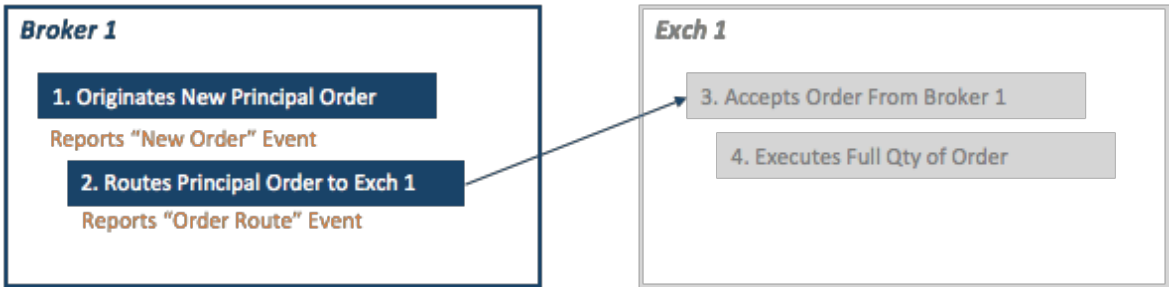
2.1.1. New Principal Order Routed to Exchange and Executed

This scenario illustrates the reporting requirements to CAT for an Industry Member that creates a new principal order, routes it to an exchange, and then the order is executed on the exchange.

For this scenario, Industry Member Broker 1 is required to report the following events:

- The creation of a New Order (Principal)
- The route to an exchange as an Order Route event

Note that the execution will be reported by the exchange, Broker 1 does not need to report the fill received.



#	Step	Reported Event	Comments
1	Broker 1 creates a New Order (Order A)	*Broker 1 reports a* ***New Order event*** type: MENO eventTimestamp: 20180501T153035.234456 manualFlag: false symbol: XYZ orderID: O12345 deptType: T side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: PRO001 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	• A new principal order is created

#	Step	Reported Event	Comments
2	Broker 1 routes Order A to Exch 1	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180501T153035.234556 manualFlag: false symbol: XYZ senderIMID: FRMA destination: EXCH1 destinationType: E orderID: O12345 routedOrderID: AO123 session: s5 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	• Broker 1 routes the order to an exchange to be executed
3	Exch 1 accepts order from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
4	Exch 1 executes full quantity (1000) of Order A	*Exch 1 reports a Participant **Trade event***	The whole quantity of the order is executed at the exchange and confirmed to Broker 1

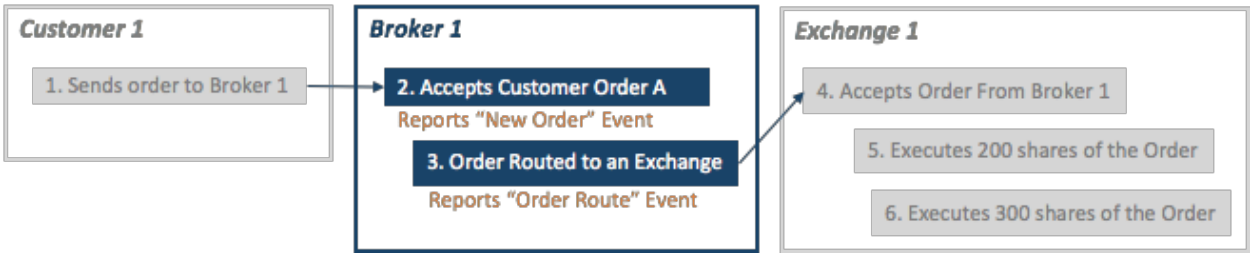
2.1.2. Customer Order Routed to Exchange as Agent

This scenario illustrates the reporting requirements to CAT for an Industry Member that routes a customer order to an exchange on an agency basis.

For this scenario, Industry Member Broker 1 is required to report the following events:

- New Order event for the customer order
- Order Route event for routing the customer order to the exchange

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 customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T153035.234456 manualFlag: false symbol: XYZ orderID: O11111 deptType: A side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: Fb custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	The Broker 1 receives the customer order and assigns it internal orderID: O11111
3	Broker 1 routes order to exchange EXCH1	Broker 1 (IMID = FRMA) reports an ***Order Route event*** type: MEOR eventTimestamp: 20180417T153035.234556 manualFlag: false symbol: XYZ senderIMID: FRMA destination: EXCH1 destinationType: E orderID: O11111 routedOrderID: XYZO555 session: s5 side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA handlingInstructions: RAR	Broker 1 routes the customer order to an exchange with senderIMID = FRMA, which is the IMID known by the destination exchange. The following data elements will be used to create the linkage key. • Date: 20180417 • symbol: XYZ • senderIMID: FRMA • destination: EXCH1 • routedOrderID: XYZO555 • session: s5 Since the values in *handlingInstructions* have not changed from the New Order to the Order Route, Broker 1 may use value "RAR" in *handlingInstructions* indicating the order was "routed as received". Alternatively, firms have the option to re-state all *handlingInstructions* values.

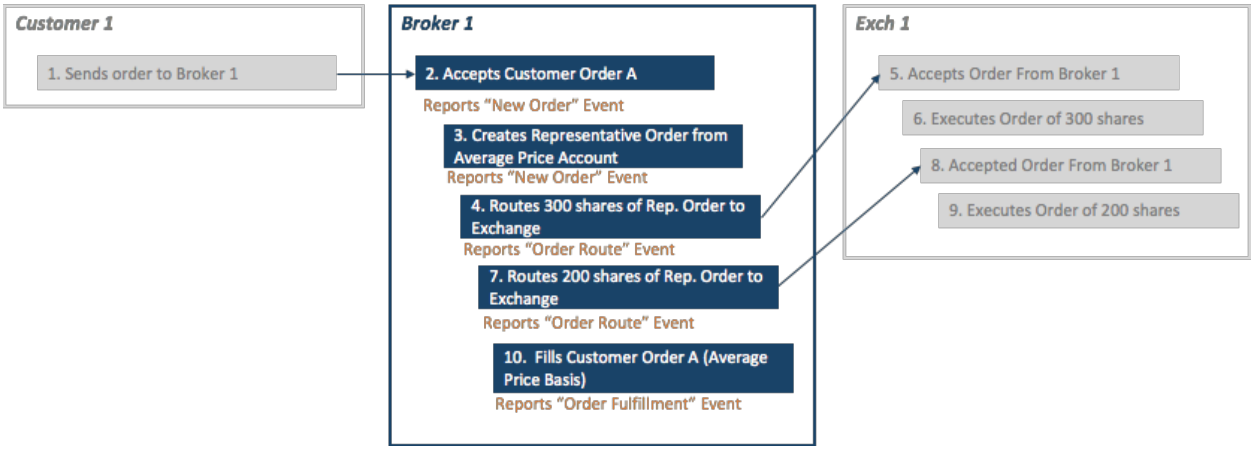
#	Step	Reported Event	Comments
4	The Exchange accepts order from Broker 1	*EXCH1 reports a Participant* ***Order Accepted event***	In the Order Accepted event reported by Exchange 1, the following data elements will be used to find the corresponding Order Route event reporting by the routing firm. • Date: 20180417 • symbol: XYZ • routingParty: FRMA • exchange: EXCH1 • routedOrderID: XYZO555 • session: s5
5	The Exchange executes a partial quantity (200) of the order	*EXCH1 reports a Participant* ***Trade event***	200 shares of the 500 order are executed
6	The Exchange executes a partial quantity (300) of the order	*EXCH1 reports a Participant* ***Trade event***	300 shares of the 500 order are executed

2.1.3. Customer Order Fulfilled on Average Price Basis

This scenario illustrates the reporting requirements to CAT for an Industry Member that works a customer order through an average price account by routing one or more representative orders to the exchange. The Industry Member then fills the customer order on an average price basis.

For this scenario, Industry Member Broker 1 is required to report the following events:

- New Order event for the customer order
- New Order event for the representative order created from the average price account
- Order Route event for each representative order, or portion of the representative order, routed to the exchange
- Order Fulfillment event to report the average price given to the customer



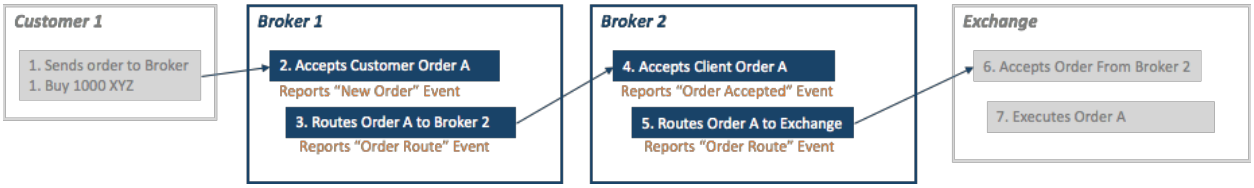
#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T153035.234456 manualFlag: false symbol: XYZ orderID: O12345 deptType: A side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Broker 1 receives the customer order and assigns it internal orderID: O12345
3	Broker 1 creates a representative order from its average price account	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T153035.534456 manualFlag: false symbol: XYZ orderID: R04826 deptType: T side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: AVG0123 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: YF	In Phase 2a, firms are not required to link the representative order to the original customer order. Firms must populate value 'YF' in the field *representativeInd* to indicate that linkage will not be provided until a future phase.

#	Step	Reported Event	Comments
4	Broker 1 routes 300 shares of the representative order to exchange EXCH1	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T153036.234556 manualFlag: false symbol: XYZ senderIMID: FRMA destination: EXCH1 destinationType: E orderID: R04826 routedOrderID: XYZO555 session: s5 side: Buy price: 10.00 quantity: 300 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	
5	The Exchange accepts order from Broker 1	*EXCH1 reports a Participant **Order Accepted event***	
6	The Exchange executes order	*EXCH1 reports a Participant **Trade event***	300 shares of the 500 order are executed
7	Broker 1 routes 200 shares of the representative order to exchange EXCH1	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T153036.234566 manualFlag: false symbol: XYZ senderIMID: FRMA destination: EXCH1 destinationType: E orderID: R04826 routedOrderID: XYZ0888 session: s5 side: Buy price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	
8	The Exchange accepts 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***	200 shares of the 500 order are executed

#	Step	Reported Event	Comments
10	Broker 1 fills the customer order from the average price account	Broker 1 reports an ***Order Fulfillment event*** type: MEOF eventTimestamp: 20180417T153037.326456 manualFlag: false symbol: XYZ fulfillmentID: AABB1231 quantity: 500 price: 10.00 fulfillmentLinkType: YF clientDetails: orderID: O12345 sideIMID: FRMA side: Buy leavesQty: 0 capacity: Agency	In Phase 2a, reports must use *fulfillmentLinkType* = YF when only reporting one side of the fulfillment since linkage to the representative order is not required until a future phase.

2.1.4. Order Routed between Two Industry Members and Subsequently Executed

This scenario illustrates the reporting requirement when an order is routed from one Industry Member to another.



For this scenario, Industry Member Broker 1 is required to report the following events:

- New Order event for the customer order
- Order Route event for routing the customer order to Broker 2

For this scenario, Industry Member Broker 2 is required to report the following events:

- Order Accepted event for the received client order from Broker 1
- Order Route event for routing the client order to the exchange

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

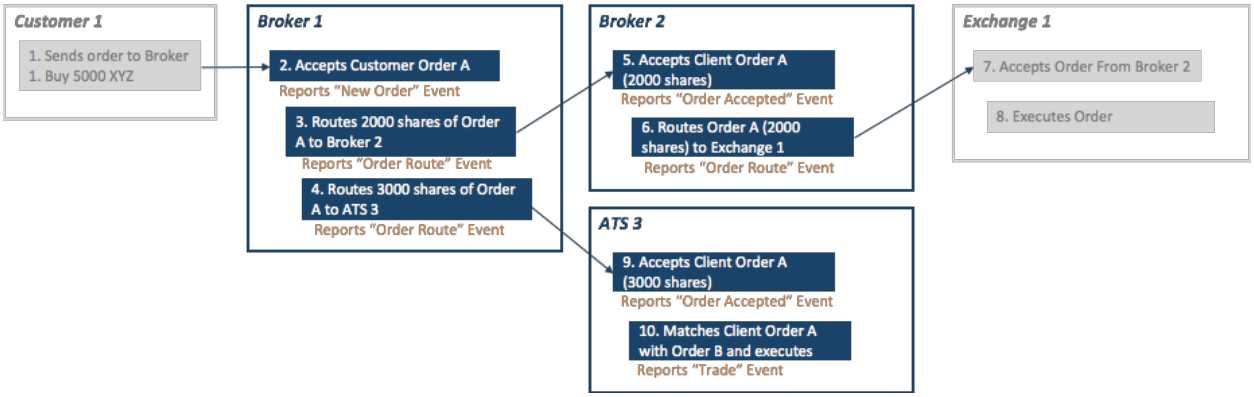
#	Step	Reported Event	Comments
2	Broker 1 accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T153035.234456 manualFlag: false symbol: XYZ orderID: O23456 deptType: A side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Broker 1 receives the customer order and assigns it internal *orderID* = O23456
3	Broker 1 routes order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T153035.234556 manualFlag: false symbol: XYZ senderIMID: FRMA destination: FRMB destinationType: E orderID: O23456 routedOrderID: AO222 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The following data elements are used to link to Broker 2 Order Accepted event. The values must match the corresponding fields as shown in the step (#4) below. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: FRMA • destination: FRMB • routedOrderID: AO222 Since Broker 1 is routing to another Industry Member, *session* must not be populated.

#	Step	Reported Event	Comments
4	Broker 2 accepts client order from Broker 1	Broker 2 reports an ***Order Accepted event*** type: MEOA eventTimestamp: 20180417T143031.323556 manualFlag: false symbol: XYZ orderID: O34567 receiverIMID: FRMB routingOrigin: FRMA routingOriginType: F routedOrderID: AO222 affiliateFlag: false deptType: A side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REGisoInd: NA custDspIntrFlag: false	The following data elements are used to link to Broker 1 Order Route event. The values must match the corresponding fields as shown in the step (#3) above. • Date (from eventTimestamp):20180417 • symbol: XYZ • receiverIMID: FRMB • routingOrigin: FRMA • routedOrderID: AO222 Since Broker 2 received the order from another Industry Member, *session* must not be populated.
5	Broker 2 routes order to exchange EXCH1	Broker 2 reports an ***Order Route event*** type: MEOR eventTimestamp: 20180417T143031.324556 manualFlag: false symbol: XYZ senderIMID: FRMB destination: EXCH1 destinationType: E orderID: O34567 routedOrderID: XYZO555 session: Es6:AA side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The following data elements are used to link to the Exchange's Order Accepted event. The values must match the corresponding fields as shown in the step (#6) below. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: FRMB • destination: EXCH1 • routedOrderID: AO222 • session: Es6:AA

#	Step	Reported Event	Comments
6	The Exchange accepts order from Broker 2	*EXCH1 reports a Participant* ***Order Accepted event***	The following data elements are used to link to the Broker 2's Order Route event. The values must match the corresponding fields as shown in the step (#5) above. • Date (from eventTimestamp):20180417 • symbol: XYZ • routingParty: FRMB • exchange: EXCH1 • routedOrderID: AO222 • session: Es6:AA
7	The Exchange executes the order	*EXCH1 reports a Participant* ***Trade event***	

2.1.5. Order Split and Routed to Multiple Industry Members, Exchange, and Filled

This section illustrates the reporting requirement when a customer order is split and each slice is subsequently routed to different parties - external Industry Member and subsequently an exchange and to an ATS.



For this scenario, Industry Member Broker 1 is required to report the following events:
- New Order event for the customer order
- Order Route event for the routing of an order slice to Broker 2
- Order Route event for the routing of an order slice to ATS 3

For this scenario, Industry Member Broker 2 is required to report the following events:
- Order Accepted event for the received client order from Broker 1
- Order Route event for routing of the order to Exchange 1

For this scenario, Industry Member ATS 3 is required to report the following events:
- Order Accepted event for the received client order from Broker 1
- Trade event when the order is matched

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T153035.234456 manualFlag: false symbol: XYZ orderID: O45678 deptType: A side: Buy price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS002 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Broker 1 receives the customer order and assigns it internal orderID O45678. The order was received by the desk/department that handled the order.
3	Broker 1 routes order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T153035.234556 manualFlag: false symbol: XYZ senderIMID: FRMA destination: FRMB destinationType: F orderID: O45678 routedOrderID: ABO4561 side: Buy price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	Broker 2 is the destination of the route from Broker 1. Broker 1 assigned unique routedOrderID ABO4561 to the 2000 share slice of the order. The following data elements are used to link to Broker 2's Order Accepted event. The values must match the corresponding fields as shown in step #5 below. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: FRMA • destination: FRMB • routedOrderID: ABO4561 Since Broker 1 is routing to another Industry Member, *session* must not be populated.

#	Step	Reported Event	Comments
4	Broker 1 routes order to ATS 3	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T153035.234556 manualFlag: false symbol: XYZ senderIMID: FRMA destination: ATSC destinationType: F orderID: O45678 routedOrderID: ACO4562 side: Buy price: 10.00 quantity: 3000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	ATS 3 is the destination of the route from Broker 1. Broker 1 assigned unique routedOrderID ACO4562 to the 3000 shares slice of the order. The following data elements are used to link to ATS 3 Order Accepted event. The values must match the corresponding fields as shown in step #9 below. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: FRMA • destination: ATSC • routedOrderID: ACO4562 Since Broker 1 is routing to another Industry Member, *session* must not be populated.
5	Broker 2 accepts client order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T153035.334556 manualFlag: false symbol: XYZ orderID: O21234 receiverIMID: FRMB routingOrigin: FRMA routingOriginType: F routedOrderID: ABO4561 affiliateFlag: false deptType: A side: Buy price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY tradingSession: REGisoInd: NA custDspIntrFlag: false	Broker 2 accepts order ABO4561 from Broker 1 and assigns internal ID O21234. The following data elements are used to link to Broker 1 Order Route event. The values must match the corresponding fields as shown in step #3 above. • Date (from eventTimestamp):20180417 • symbol: XYZ • receiverIMID: FRMB • routingOrigin: FRMA • routedOrderID: ABO4561 Since Broker 2 received the order from another Industry Member, *session* must not be populated.

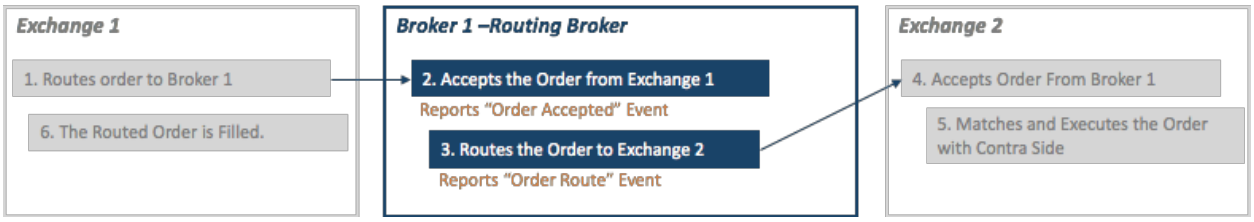
#	Step	Reported Event	Comments
6	Broker 2 routes order to Exchange 1	*Broker 2 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T153035.334656 manualFlag: false symbol: XYZ senderIMID: FRMB destination: EXCH1 destinationType: E orderID: O21234 routedOrderID: XYZO555 session: s5 side: Buy price: 10.00 quantity: 2000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The following data elements are used to link to the Exchange's Order Accepted event. The values must match the corresponding fields reported by the exchange. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: FRMB • destination: EXCH1 • routedOrderID: XYZO555 • session: s5
7	Exchange 1 accepts order from Broker 2	*EXCH1 reports a Participant **Order Accepted event***	
8	Exchange 1 executes the order	*EXCH1 reports a Participant **Trade event***	

#	Step	Reported Event	Comments
9	ATS 3 accepts client order from Broker 1	*ATS 3 reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T153035.334557 manualFlag: false symbol: XYZ orderID: O31235 receiverIMID: ATSC routingOrigin: FRMA routingOriginType: F routedOrderID: ACO4562 affiliateFlag: falsedeptType: A side: Buy price: 10.00 quantity: 3000 orderType: LMT timeInForce: DAY tradingSession: REGisoInd: NA custDspIntrFlag: false seqNum: 10987 workingPrice: 10.02 atsOrderType: Fb nbbPrice: 9.99 nboPrice:10.02 nbboSource: SIP nbboTimestamp: 20180417T153035.334527	TS 3 accepts order ACO4562 from Broker 1 and assigns internal ID O31235. The following data elements are used to link to Broker 1 Order Route event. The values must match the corresponding fields as shown in step #4 above. • Date (from eventTimestamp):20180417 • symbol: XYZ • receiverIMID: ATSC • routingOrigin: FRMA • routedOrderID: ACO4562 Since ATS 3 received the order from another Industry Member, *session* must not be populated.

#	Step	Reported Event	Comments
10	ATS 3 matches Order A with sell order (ID: 21945)	*ATS 3 reports a **Trade event*** type: MEOT eventTimestamp: 20180417T153035.334657 manualFlag: false symbol: XYZ tradeID: T4562111 quantity: 3000 price: 10.00 negotiatedTradeSide: NA buyDetails: orderID: O31235 sideIMID: FRMA side: Buy leavesQty: 0 capacity: Agency tapeTradeID: TP12345 sellDetails: orderID: 21945 sideIMID:FRMX side: Sell leavesQty: 2000 capacity: Agency tapeTradeID: TP67890 seqNum: 12007 nbbPrice: 10.00 nboPrice: 10.02 nbboSource: SIP nbboTimestamp: 20180417T153035.334457	The sell side is another client order at the ATS. The sell order is partially executed.

2.1.6. Order Routed from an Exchange through a Routing Broker to another Exchange

This section will show the scenario when one exchange routes an order via a routing broker who is an Industry Member to another exchange.



For this scenario, the exchange that routes the order (Exchange 1) must report:

- The route of the order to its routing broker
- After the execution, a Fill of the routed order

The routing broker (Industry Member Broker 1) must report the following events:

- The receipt of the order from the exchange as an Order Accepted event
- Order Route event for the route of the order to another exchange

The exchange that accepts the routed order (Exchange 2) must report the following events:

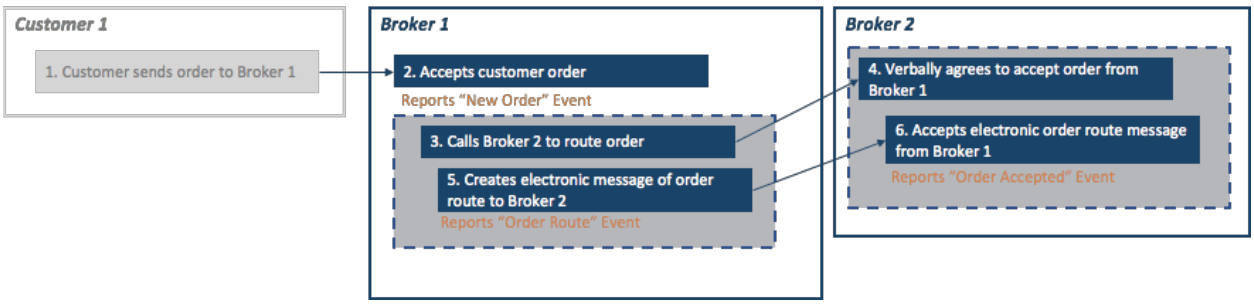
- The receipt of the order routed from Broker 1; and
- Any subsequent order handling events, if applicable

#	Step	Reported Event	Comments
1	Exchange 1 routes an order to a routing broker.	*Exchange 1 reports a Participant* ***Route event***	The Route event reported by the exchange will contain the following elements for creating linkages in CAT: • exchange: Exch1 • routingParty: FIRM1 • symbol: XYZ • session: 1101 • routedOrderID: S2O12345
2	Broker 1 accepts the order from Exchange 1	*Broker 1 reports an* ***Order Accepted event*** type: MEOA eventTimestamp: 20170801T143030.234456 manualFlag: false symbol: XYZ orderID: O12345 receiverIMID: FIRM1 routingOrigin: Exch1 routingOriginType: E routedOrderID: S2O12345 affiliateFlag: false deptType: A session: 1101 side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REGisoInd: NA custDspIntrFlag: false	The following data elements in this Order Accepted must match those reported in Exchange 1 Route event to create linkages (Refer to the comments in step 1): • routingOrigin: Exch1 • receiverIMID: FIRM1 • symbol: XYZ • session: 1101 • routedOrderID: S2O12345

#	Step	Reported Event	Comments
3	Broker 1 then routes the order to another exchange	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20170801T143031.234456 manualFlag: false symbol: XYZ senderIMID: FIRM1 destination: Exch2 destinationType: E orderID: O12345 routedOrderID: S9O12345 session: 1109 side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	This event will be linked to the Order Accepted event reported by the Exchange 2 (see step #4 below) via the following attributes: • senderIMID: FIRM1 • destination: Exch2 • Symbol: XYZ • Session: 1109 • routedOrderID: S9O12345
4	Exchange 2 receives the order from Broker 1	*Exchange 2 reports a Participant **Order Accepted event***	Please refer to the Participant reporting technical specifications for more details. As the illustration of linkages, the following elements will be present to link to the Order Route in step #3 above: • routingParty: FIRM1 • Exchange: Exch2 • Symbol: XYZ • Session: 1109 • routedOrderID: S9O12345
5	Exchange 2 crosses the order with the contra side	*Exchange 2 reports a Participant **Trade event***	
6	Exchange 1 receives the fill on the routed order	*Exchange 1 reports a Participant **Fill Event***	

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

This scenario illustrates the reporting requirements when an Industry Member manually routes an order to another Industry Member and follows up with an electronic route message.



For this scenario, the sending Industry Member Broker 1 is required to report:

- New Order event for the customer order
- Order Route event for the electronically routed order (inclusive of *routedOrderID*) to Broker 2 with both the electronic and original manual timestamp

For this scenario, the receiving Industry Member Broker 2 is required to report:

- Order Accepted event for the electronically received client order (inclusive of *routedOrderID*) from Broker 1 with both the electronic and original manual timestamp

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a* ***New Order event*** type: MENO eventTimestamp: 20180417T143035.123456 manualFlag: false symbol: XYZ orderID: O23456 deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY 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 order route		

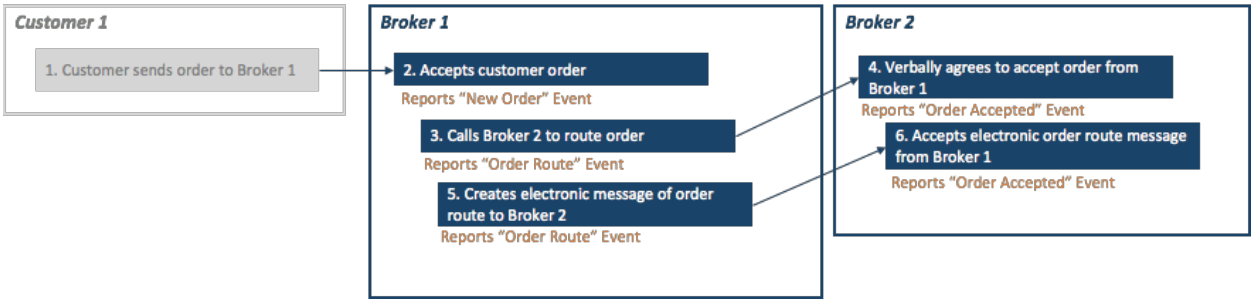
#	Step	Reported Event	Comments
5	Broker 1 creates an electronic order route message and sends to Broker 2	*Broker 1 (IMID = FRMA) reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T143036 manualFlag: true electronicTimestamp:20180417T143040.123456 symbol: XYZ senderIMID: FRMA destination: FRMB destinationType: F orderID: O23456 routedOrderID: RT5678 side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	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 microsecond granularity.
6	Broker 2 accepts the electronic order route message	*Broker 2 (IMID = FRMB) reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T143036 manualFlag: true electronicTimestamp:20180417T143040.126456 symbol: XYZ orderID: O34567 routedOrderID: RT5678 affiliateFlag: false receiverIMID: FRMB routingOrigin FRMA routingOriginType: F deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	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.

2.1.8. Manual Order Route, Electronic Duplicate Order

This scenario illustrates the Phase 2a reporting requirements when an Industry Member manually routes an order but is unable to merge the manual and electronic copies of the order into a single message for CAT Reporting. The Industry Member may report a manual order route event without a routedOrderID, followed by an electronic event which must include *electronicDupFlag* = true.

For this scenario, Industry Member Broker 1 is required to report:
- New Order event for the receipt of the customer order
- Order Route event for the manual route to Broker 2
- Order Route event for the electronic route message sent to Broker 2 (marked with *electronicDupFlag* = true)

For this scenario, Industry Member Broker 2 is required to report:
- Order Accepted event once agreeing to the route from Broker 1
- Order Accepted event for the receipt of the electronic order route from Broker 1 (marked with *electronicDupFlag* = true)



#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T143035.123456 manualFlag: false symbol: XYZ orderID: O23456 deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDsplntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false	

#	Step	Reported Event	Comments
		representativeInd: N	
3	Broker 1 calls Broker 2 to route the order	*Broker 1 (IMID = FRMA) reports an* ***Order Route event*** type: MEOR eventTimestamp: 20180417T143036 manualFlag: true symbol: XYZ senderIMID: FRMA destination: FRMB destinationType: F orderID: O23456 side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	*routedOrderID* is not required

#	Step	Reported Event	Comments
4	Broker 2 verbally accepts order route	*Broker 2 (IMID = FRMB) reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T143036 manualFlag: true symbol: XYZ orderID: O34567E receiverIMID: FRMB routingOrigin FRMA routingOriginType: F affiliateFlag: false deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	*routedOrderID* is not required
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 eventTimestamp: 20180417T143040.123456 manualFlag: true electronicDupFlag: true symbol: XYZ senderIMID: FRMA destination: FRMB destinationType: F orderID: O23456 routedOrderID: RT5678 side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The *electronicDupFlag* must be set to 'true', indicating that this event is the electronic copy of a previously reported event. The orderID on the duplicative electronic message must match the internal orderID. Linkage is not being attempted until Phase 2c.

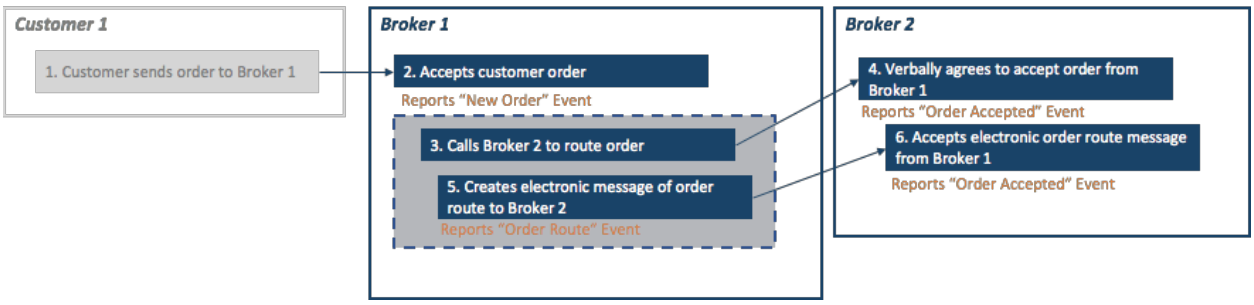
#	Step	Reported Event	Comments
6	Broker 2 accepts the electronic order route message	*Broker 2 (IMID = FRMB) reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T143040.126456 manualFlag: true electronicDupFlag: true symbol: XYZ orderID: O34567FIX routedOrderID: RT5678 manualOrderID: O34567E receiverIMID: FRMB routingOrigin: FRMA routingOriginType: F affiliateFlag: false deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY 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. The internal *orderID* is different than the manual Order Accepted event. The Industry Member assigns a new orderID upon receipt of the electronic message. Optional in Phase 2a, the Industry Member may capture the *manualOrderID* (O34567E) to reference the manual order that was previously reported.

2.1.9. Manual Order, One Side Reports Merged Event

This scenario illustrates the Phase 2a reporting requirements when an Industry Member manually routes an order to anther Industry Member. The sending Industry Member chooses to report a single merged order event with both a manual and systematized timestamp, but the receiving Industry Member reports the receipt of the order twice - once for the manual receipt of the order followed by an electronic duplicate event which includes the *electronicDupFlag* = true.
Note that in Phase 2a, events with either *manualFlag* = true or *electronicDupFlag* = true will not be subject to the standard inter-firm linkage process.

For this scenario, the sending Industry Member Broker 1 is required to report:
- New Order event for the customer order
- Order Route event for the electronically routed order (inclusive of routedOrderID) to Broker 2 with both the electronic and original manual timestamp

For this scenario, the receiving Industry Member Broker 2 is required to report:
- Order Accepted event for agreeing to the route from Broker 1 (with *manualFlag* = true)
- Order Accepted event for the receipt of the electronic order route from Broker 1 (marked with *electronicDupFlag* = true)



#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a* ***New Order event*** type: MENO eventTimestamp: 20180417T143035.123456 manualFlag: false symbol: XYZ orderID: O23456 deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 calls Broker 2 to route the order		

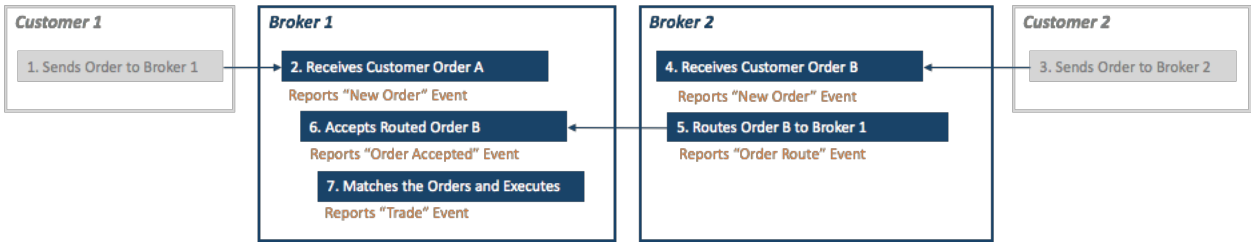
#	Step	Reported Event	Comments
4	Broker 2 verbally accepts order route	*Broker 2 (IMID = FRMB) reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T143036 manualFlag: true symbol: XYZ orderID: O34567E receiverIMID: FRMB routingOrigin FRMA routingOriginType: F affiliateFlag: false deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	*routedOrderID* is not required
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 eventTimestamp: 20180417T143036 manualFlag: true electronicTimestamp:20180417T143040.123456 symbol: XYZ senderIMID: FRMA destination: FRMB destinationType: F orderID: O23456 routedOrderID: RT5678 side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	Broker 1 reports a merged event for the Order Route. 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 microsecond granularity.

#	Step	Reported Event	Comments
6	Broker 2 accepts the electronic order route message	*Broker 2 (IMID = FRMB) reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T143040.126456 manualFlag: true electronicDupFlag: true symbol: XYZ orderID: O34567FIX routedOrderID: RT5678 manualOrderID: O34567E affiliateFlag: false receiverIMID: FRMB routingOrigin FRMA routingOriginType: F deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY 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. The internal *orderID* is different than the manual Order Accepted event. The Industry Member assigns a new orderID upon receipt of the electronic message. Optional in Phase 2a, the Industry Member may capture the *manualOrderID* (O34567E) to reference the manual order that was previously reported.

2.2. Trade Scenarios

2.2.1. Agency Order Cross

This scenario illustrates the reporting requirements to CAT when an Industry Member (Broker 1) matches a Customer Buy order with a Sell order routed from another Industry Member (Broker 2).



For this scenario, Industry Member Broker 1 is required to report the following events:

1) The receipt of the order from the customer (New Order event)
2) The receipt of the order routed from Broker 1 (Order Accepted event)
3) The execution (Trade event)

Industry Member Broker 2 would report the following events:

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

The customer Order A at Broker 1 was fully executed, while the routed order from Broker 2 was partially executed.

For ATS agency order cross, please refer to Section 2.2.1 step 10 for more details.

#	Step	Reported Event	Comments
1	Client sends a BUY order to Broker 1.	*NA*	

#	Step	Reported Event	Comments
2	Broker 1 received a BUY order from the client	*Broker 1 (IMID=FRMA) reports a **New Order event*** type: MENO eventTimestamp: 20170801T143031.123456 manualFlag: false symbol: XYZ orderID: O12345 deptType: A side: Buy price: 10.01 quantity: 300 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: INC123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	• Broker 1 received the customer order and assigned internal order ID: O12345
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 eventTimestamp: 20170801T143031.523456 manualFlag: false symbol: XYZ orderID: O555 deptType: A side: Sell price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: INC555 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	

#	Step	Reported Event	Comments
5	Broker 2 routed a Sell order to Broker 1 (IMID = FRMA)	*Broker 2 reports an **Order Route event*** type: MEOR eventTimestamp: 20170801T143031.134456 manualFlag: false symbol: XYZ senderIMID: ABCD destination: FRMA destinationType: F orderID: O555 routedOrderID: ABCDXYZ555 side: Sell price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	In this Route event, the field senderIMID, destination, together with symbol, date, and routedOrderID are used in linking to the Order Accepted event reported by the destination
6	Broker 1 received a routed order from Broker 2 (IMID = ABCD)	*Broker 1 reports an **Order Accepted event*** type: MEOA eventTimstamp: 20170801T143031.234456 manualFlag: false symbol: XYZ orderID: O12347 receiverIMID: FRMA routingOrigin: ABCD routingOriginType: F routedOrderID: ABCDXYZ555 affiliateFlag: false deptType: A side: Sell price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDsplntrFlag: false	• The Broker accepted the sell order routed from Broker 2 and assigned it the internal order ID: O12347

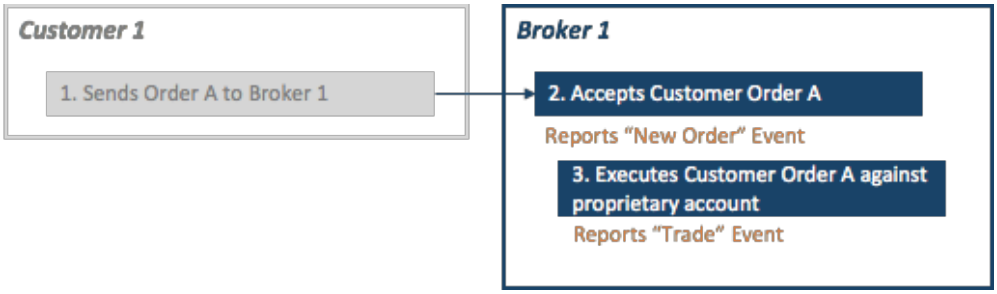
#	Step	Reported Event	Comments
7	Broker 1 matched and crossed the Buy and Sell orders	*Broker 1 reports a **Trade event*** type: MEOT eventTimestamp: 20170801T143031.253456 manualFlag: false symbol: XYZ tradeID: TXYZ124 quantity: 300 price: 10.01 marketCenterID: DN negotiatedTradeSide: NA buyDetails: orderID: O12345 sideIMID: FRMA side: Buy leavesQty: 0 capacity: Agency tapeTradeID: TRF123 sellDetails: orderID: O12347 sideIMID: ABCD side: Sell leavesQty: 200 capacity: Agency tapeTradeID: TRF987	• In this Trade Event, the Buy side is customer order O12345, and the Sell side details reflect the routed order O12347

2.2.2. Internalized Trade against Proprietary Account

This scenario illustrates the reporting requirements to CAT for an Industry Member that executes a customer order against its own proprietary account.

For this scenario, Industry Member Broker 1 is required to report the following events:

- The receipt of the customer order as a New Order event (New Order event)
- The execution as a Trade event

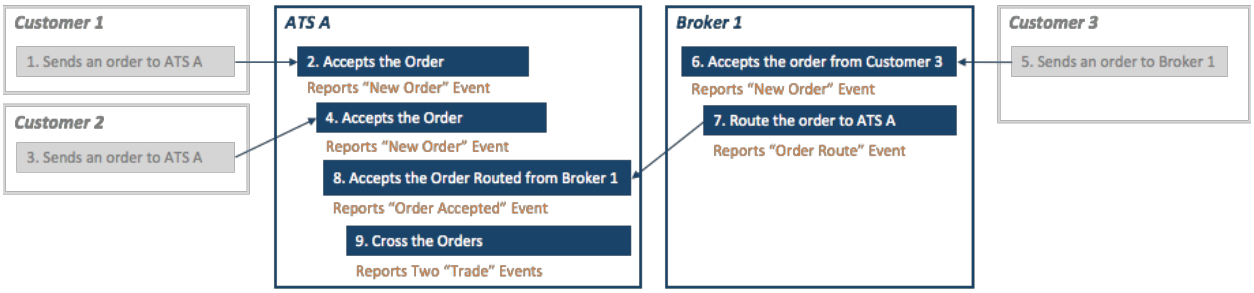


#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimstamp: 20180416T153035.234456 manualFlag: false symbol: XYZ orderID: O12345 deptType: T side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	• Broker 1 receives the customer order and assigns it internal orderID: O12345
3	Broker 1 executes order against own proprietary account	*Broker 1 reports a **Trade event*** type: MEOT eventTimestamp: 20180416T153035.253456 manualFlag: false symbol: XYZ tradeID: TXYZ555 quantity: 500 price: 10.00 marketCenterID: DN negotiatedTradeSide: NA buyDetails: orderID: O12345 sideIMID: FRMA side: Buy leavesQty: 0 capacity: Principal tapeTradeID: TRF123 sellDetails: sideIMID: FRMA side: Sell capacity: Principal firmDesignatedID: PROP123 accountHolderType: P	• For this Trade event, the clientDetails side reflects the details of customer order O12345, and the firmDetails side captures the FDID of the firm proprietary account which the customer order was filled against • The following data elements will be used to look up the corresponding TRF records: • sideIMID: FRMA • Date: 20180416 • Symbol: XYZ • tapeTradeID: TRF123

2.2.3. ATS Cross with Multiple Orders on One Side

This scenario illustrates the reporting requirement when an ATS performs a cross that has multiple orders on one side. For this case, the ATS must report:

- The receipt of the three orders involved in the execution (three Order Accepted events)
- Two Trade Events



#	Step	Reported Event	Comments
1	Customer 1 sends a Buy order to ATS A	*NA*	
2	ATS A accepts customer order	*ATS A reports a* ***New Order event*** type: MENO eventTimstamp: 20180416T153035.234456 manualFlag: false symbol: XYZ orderID: O12345 deptType: ATS side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N seqNum: 1201 workingPrice: 10.00 displayQty: 0 atsOrderType: P1 nbbPrice: 9.99 nboPrice: 10.03 nbboSource: SIP nbboTimstamp: 20180416T153035.234455	• ATS A receives the customer order and assigns it internal orderID: O12345
3	Customer 2 sends a Buy order to ATS A	*NA*	

#	Step	Reported Event	Comments
4	ATS A accepts customer order	*ATS A reports a **New Order event*** type: MENO eventTimstamp: 20180416T153035.334456 manualFlag: false symbol: XYZ orderID: O123999 deptType: ATS side: Buy price: 10.00 quantity: 700 orderType: LMT timeInForce: DAY tradingSession: REG custDsplntrFlag: false firmDesignatedID: INS567 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N seqNum: 1235 workingPrice: 10.00 displayQty: 0 atsOrderType: P1 nbbPrice: 10.00 nboPrice: 10.03 nbboSource: SIP nbboTimstamp: 20180416T153035.334454	• ATS A receives the customer order and assigns it internal orderID: O123999
5	Customer 3 sends a Sell order to Broker 1	*NA*	
6	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimstamp: 20180416T153034.334456 manualFlag: false symbol: XYZ orderID: O8000 deptType: T side: Sell price: 10.00 quantity: 1200 orderType: LMT timeInForce: DAY tradingSession: REG custDsplntrFlag: false firmDesignatedID: CUST-IN200 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false	• Broker 1 receives the customer order and assigns it internal orderID: O8000

#	Step	Reported Event	Comments
7	Broker 1 routes the order to ATS A	*Broker 1 (IMID = BRKA) reports an **Order Route event*** type: MEOR eventTimestamp: 20180416T153035.000456 manualFlag: false symbol: XYZ senderIMID: BRKA destination: ATSA destinationType: F orderID: O8000 routedOrderID: ATSAXYZ8000 side: Sell price: 10.00 quantity: 1200 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The IMID of the ATS is "ATSA". The following fields are used to link to the Order Accepted by the ATS • Date: 20180416 • symbol: XYZ • senderIMID: BRKA • destination: ATSA • routedOrderID: ATSAXYZ8000 Since Broker 1 is routing to another Industry Member, *session* must not be populated.
8	ATS A accepts the order routed from Broker 1	*ATS A (IMID = ATSA) reports an **Order Accepted event*** type: MEOA eventTimstamp: 20180416T153035.444456 manualFlag: false symbol: XYZ orderID: O88855 receiverIMID: ATSA routingOrigin: BRKA routingOriginType: F routedOrderID: ATSAXYZ8000 affiliateFlag: false deptType: ATS side: Sell price: 10.00 quantity: 1200 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false seqNum: 1240 workingPrice: 10.00 displayQty: 0 atsOrderType: P2 nbbPrice: 10.00 nboPrice: 10.03 nbboSource: SIP	The following fields are used to link to the Broker 1 Route event: • Date: 20180416 • symbol: XYZ • receiverIMID: ATSA • routingOrigin: BRKA • routedOrderID: ATSAXYZ8000 Since ATS A received the order from another Industry Member, *session* must not be populated.

#	Step	Reported Event	Comments
		nbboTimstamp: 20180416T153035.444454	

#	Step	Reported Event	Comments
9	ATS A performs the cross. Orders are executed.	*ATS A reports an **Trade event** with O12345 and O88855 on the sides* type: MEOT eventTimestamp: 20180416T153035.494456 manualFlag: false symbol: XYZ tradeID: TXYZ100 quantity: 500 price: 10.00 marketCenterID: DN negotiatedTradeSide: NA buyDetails: orderID: O12345 sideMID: ATSA side: Buy leavesQty: 0 capacity: Agency tapeTradeID: BRSEQ9000 sellDetails: orderID: O88855 sideMID: BRKA side: Sell leavesQty: 0 capacity: Agency tapeTradeID: BRSEQ9000 seqNum: 1241 nbbPrice: 10.00 nboPrice: 10.02 nbboSource: SIP nbboTimestamp: 20180416T153035.494450	

#	Step	Reported Event	Comments
9	(Cont.)	*ATS A reports an **Trade event** with O123999 and O88855 on the sides* type: MEOT eventTimestamp: 20180416T153035.494456 manualFlag: false symbol: XYZ tradeID: TXYZ100 quantity: 700 price: 10.00 marketCenterID: DN negotiatedTradeSide: NA buyDetails: orderID: O123999 sideIMID: ATSA side: Buy leavesQty: 0 capacity: Agency tapeTradeID: BRSEQ9000 sellDetails: orderID: O88855 sideIMID: BRKA side: Sell leavesQty: 0 capacity: Agency tapeTradeID: BRSEQ9000 seqNum: 1241 nbbPrice: 10.00 nboPrice: 10.02 nbboSource: SIP nbboTimestamp: 20180416T153035.494450	

2.2.4. Negotiated Trade

This scenario illustrates the reporting requirement when an Industry Member executes a customer order as the result of negotiating a trade with another Industry Member (e.g. through a system such as OTCLink). For this case, Industry Member Broker 1 (initiator) is required to report the following:

- The receipt of the customer order in a New Order event
- The execution of the order (Trade event)

Industry Member Broker 2 (respondent) must report the following to CAT:

- A New Order event
- The execution of the order (Trade event)

All of the New Order and Trade events occurring within the negotiation process must have the negotiatedTradeFlag and negotiatedTradeSide present and marked properly.

#	Step	Reported Event	Comments
1	Customer sends an Order to Broker 1	NA	
2	Broker 1 creates a New Order (Order A)	*Broker 1 (IMID = BRK1) reports a **New Order event*** type: MENO eventTimestamp: 20180501T153035.234456 manualFlag: false symbol: XYZ orderID: O12345 deptType: T side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUST1 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	• A new order is received from the customer

#	Step	Reported Event	Comments
3	Broker 1 initiates the negotiation with Broker 2 and an execution occurs as the result of a negotiation	*Broker 1 reports a **Trade event*** type: MEOT eventTimestamp: 20180501T153036 manualFlag: true symbol: XYZ tradeID: TR123 quantity: 1000 price: 10.00 marketCenterID: N negotiatedTradeSide: NBUY buyDetails: orderID: O12345 sideIMID: BRK1 side: Buy leavesQty: 0 capacity: Agency tapeTradeID: TRF1234 sellDetails: sideIMID: BRKB side: Sell	The negotiatedTradeSide must be marked as NBUY (negotiated Buy). The sell side only requires the IMID and side of the contra
4	Broker 2 (respondent) created an order for the negotiated trade	*Broker 2 (IMID = BRKB) reports a **New Order event*** type: MENO eventTimestamp: 20180501T153036.123456 manualFlag: false symbol: XYZ orderID: BO445 deptType: T side: Sell price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP101 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: true representativeInd: N	The negotiatedTradeFlag must be marked as true in this New Order event

#	Step	Reported Event	Comments
5	Broker 2 executed the order as the result of a negotiation	*Broker 2 reports a **Trade event*** type: MEOT eventTimestamp: 20180501T153036.123456 manualFlag: false symbol: XYZ tradeID: BNET445 quantity: 1000 price: 10.00 marketCenterID: DN negotiatedTradeSide: NSELL buyDetails: sideIMID: BRK1 side: Buy sellDetails: orderID: BO445 sideIMID: BRKB side: Sell leavesQty: 0 capacity: Principal tapeTradeID: TRFBR789	In this Trade event, the negotiatedTradeSide must be marked as NSELL, and buyDetails only requires the contra side IMID and side. The eventTimestamp of the Trade event is the same as the New Order.

2.2.5. Trade as the Result of a Quote

This scenario illustrates the reporting requirements to CAT when a Market Maker (and Industry Member Market Maker A) submits a displayed (bid) quote to an inter-dealer quotation system - Industry Member OTCM, another Market Maker (and Industry Member, Market Maker B) wants to trade at the displayed quote, sends a message through the inter-dealer quotation system, consummating in a trade.

In Phase 2a, Industry Member Market Maker A is required to report the following event:
- A Trade as a Result of a Quote event for execution against Market Maker B

For this scenario, Industry Member Market Maker B must report the following event:
- A New Order event
- A Trade event for execution against Market Maker A

For this scenario, Industry Member OTCM must report the following event:
- Quote Received event for the receipt of the quote from Market Maker A

#	Step	Reported Event	Comments
1	Market Maker A sends a quote to OTCM	*NA*	Market Maker A will be required to report this event to CAT in Phase 2c
2	OTCM accepts and displays the quote from Market Maker A	*OTCM reports a **Quote Received event*** type: MEQR eventTimestamp: 20180501T153030.123456 manualFlag: false seqNum: 1235 symbol: XYZ receiverIMID: OTCM routingOrigin: MMA quoteID: OTC1347 receivedQuoteID: AB456 unsolicitedInd: B mpStatusCode: O	The IMID of Market Maker A is MMA

#	Step	Reported Event	Comments
3	In response to the quote, Market Maker B creates an order for execution	*Market Maker B (IMID = MMB) reports a **New Order event*** type: MENO eventTimestamp: 20180501T153036.923456 manualFlag: false symbol: XYZ orderID: BO445 deptType: T side: Sell price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDsplIntrFlag: false firmDesignatedID: PROP101 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: true representativeInd: N *Market Maker B reports a **Trade event*** type: MEOT eventTimestamp: 20180501T153036.923456 manualFlag: false symbol: XYZ tradeID: EY5678 quantity: 1000 price: 10.00 marketCenterID: O negotiatedTradeSide: NSELL buyDetails: sideIMID: MMA side: Buy sellDetails: orderID: BO445 sideIMID: MMB side: Sell leavesQty: 0 capacity: Principal tapeTradeID: ORF6789	Market Maker B creates a prop order with the time of origination being the time of execution

#	Step	Reported Event	Comments
4	Market Maker A reports execution of the quote	*Market Maker A reports a* ***Trade as a Result of a Quote event*** type: MEOTQ eventTimestamp: 20180501T153036.923456 manualFlag: false symbol: XYZ tradeID: TB21567 quantity: 1000 price: 10.00 marketCenterID: O negotiatedTradeSide: NBUY buyDetails: quoteID: AB456 side: Buy capacity: Principal tapeTradeID: ORFB12321 sellDetails: sideIMID: MMA side: Sell	

2.3. Fulfillment Scenarios

2.3.1. Representative Order Execution

This section will illustrate the Phase 2a reporting requirements for the execution of a customer/client order that is not required to be reported for public dissemination purposes and use of an Order Fulfillment, rather than a Trade Event, is required.

In this scenario, Industry Member Broker A receives two customer orders to BUY XYZ at 10.01. Industry Member Broker A creates a representative order that will be used to fill 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 an agency basis.

For this scenario, Broker A is required to report the following events to CAT for the customer orders:

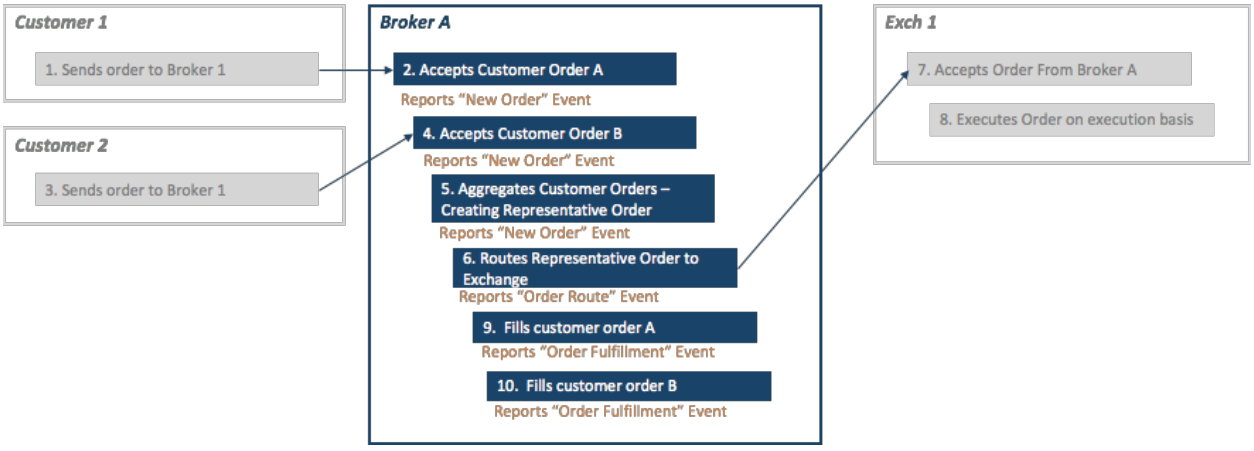
1) New Order events for the customer orders
2) An Order Fulfillment for each customer order

Broker A is required to report the following events to CAT for the representative order:

1) New Order event for the representative order (flagged to indicate it represents customer orders, but no explicit linkage to the underlying orders)
2) Routing the representative order to the exchange (Order Route event)

Note that execution of the representative order is only reported by the exchange.

Because this scenario involves an aggregation of two customer orders that are worked as a single representative order, this is a Phase 2c representative order scenario and linkage between the customer orders and the representative orders is not required. In Phase 2c, the representative order and the underlying customer orders must be linked.



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

#	Step	Reported Event	Comments
5	Broker A creates a representative order	*Broker A reports a **New Order event*** type: MENO eventTimestamp: 20170801T143031.123456 manualFlag: false symbol: XYZ orderID: RPO555 deptType: A side: Buy price: 10.01 quantity: 1200 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: PROP123 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: YF	In this New Order event, the field *representativeInd* is marked as YF to indicate the order is a representative order but explicit linkage is not reported until Phase 2c
6	Broker A routes the representative order out to an exchange for execution	*Broker A reports an **Order Route event*** type: MEOR eventTimestamp: 20170801T143031.623456 manualFlag: false symbol: XYZ senderIMID: BRKA destination: EXCH1 destinationType: E orderID: RPO555 routedOrderID: S12O555 session: 1112 side: Buy price: 10.01 quantity: 1200 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The representative order is routed out with routedOrderID S12O555 at session 1112. The route link key is created via the combination of senderIMID:destination:symbol:date:session:routedOrderID. These values must match the corresponding data elements on Participant Order Accepted event.
7	The exchange receives the order routed 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***	

#	Step	Reported Event	Comments
9, 10	Broker A fulfills the individual customer orders with the executed shares on a riskless principal basis	*Broker A reports two* ***Order Fulfillment events*** type: MEOF eventTimestamp: 20170801T143040.123456 manualFlag: false symbol: XYZ fulfillmentID: FO55501 quantity: 500 price: 10.01 fulfillmentLinkType: YF clientDetails: orderID: O12345 sideIMID: BRKA side: Buy leavesQty: 0 capacity: Riskless Principal type: MEOF eventTimestamp: 20170801T143040.323456 manualFlag: false symbol: XYZ fulfillmentID: FO55502 quantity: 700 price: 10.01 fulfillmentLinkType: YF clientDetails: orderID: O12350 sideIMID: BRKA side: Buy leavesQty: 0 capacity: Riskless Principal	In these Order Fulfillment events, because Phase 2a does not require explicit linkage to the representative order, the field *fulfillmentLinkType* = YF and firmDetail is not required to be present

2.3.2. Fill of a Single Order on a Riskless Principal Basis

This scenario illustrates the CAT reporting requirements when an Industry Member fills an order as riskless principal.

In this example, upon receipt of the customer order, the Industry Member sends a riskless principal or principal order to an exchange for execution, in order to satisfy the customer's order. The representative principal order is linked to the original customer order.

The Industry Member Broker 1 is required to report the following events to CAT:

- The creation of the customer order as a New Order event
- The creation of a riskless principal order with linkage to the original customer order (New Order event with aggregatedOrders field). As an alternative, the Industry Member may report a New Order event (for the principal order) without linkage to the customer order, and an additional New Order Supplement event
- The route of the principal order to the exchange (Order Route event)
- After the execution, the flip of the executed shares back to the customer order (an Order Fulfillment Event).

The exchange will report the following:

- The receipt of the order B routed from the Broker 1
- The execution of order

#	Step	Reported Event	Comments
1	The customer sends an order to Broker 1	N/A	
2	Upon receipt, Broker 1 create a new customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20170801T143030.123456 manualFlag: false symbol: XYZ orderID: O12345 deptType: T side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: C12345 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	The institutional customer's Firm Designated ID C12345 is captured on this New Order event

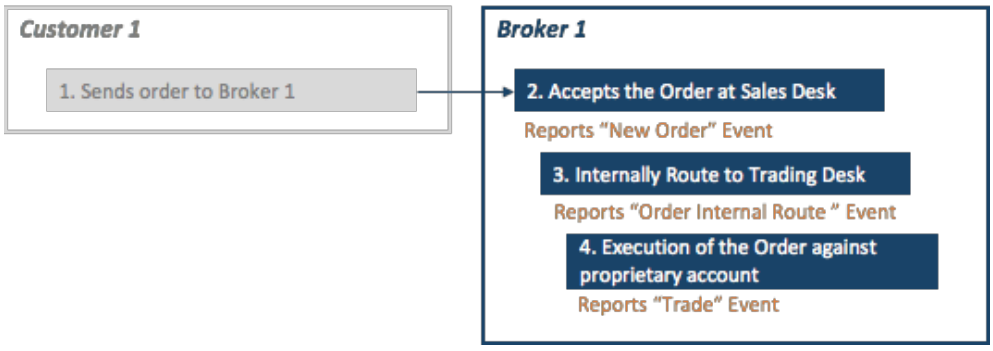
3	Broker 1 creates a new riskless principal order to satisfy the customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20170801T143030.623456 manualFlag: false symbol: XYZ orderID: O12350 deptType: T side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: C0005 accountHolderType: P affiliateFlag: false aggregatedOrders: O12345 negotiatedTradeFlag: false representativeInd: Y As an alternative, the Industry Member may choose to report a New Order event (without linkage to the customer) and a New Order Supplement event. ***New Order event*** type: MENO eventTimestamp: 20170801T143030.623456 manualFlag: false symbol: XYZ orderID: O12350 deptType: T side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: C0005 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: YS	This order is created for the firm's proprietary account (FDI C0005). The order is linked to the customer order via aggregatedOrders field. Since linkage is required in Phase 2a, *representativeInd* = Y. In the alternative reporting approach, the *aggregatedOrders* field is not present on the New Order event. The representativeInd is marked as "YS". As such, a New Order Supplement event is report.

		New Order Supplement event type: MENOS eventTimestamp: 20170801T143030.623456 symbol: XYZ orderID: O12350 aggregatedOrders: O12345	
4	Broker 1 routes the riskless principal order to an exchange	*Broker 1 reports an* ***Order Route event*** type: MEOR eventTimestamp: 20170801T143031.123456 manualFlag: false symbol: XYZ senderIMID: BRK1 destination: Exch1 destinationType: E orderID: O12350 routedOrderID: S9O12350 session: 1109 side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	Please refer to the Participant reporting technical specifications for more details. The following elements will be present on the Participant Order Accepted event: • routingParty: BRK1 • exchange: Exch1 • symbol: XYZ • session: 1109 • routedOrderID: S9O12350
5	Exchange 1 accepts the order	*Exchange 1 reports a Participant* ***Order Accepted event***	
6	Exchange 1 finds the match and crosses the order with contra side	*Exchange 1 reports a Participant* ***Trade event***	

7	Broker 1 fill the order on a riskless principal	*Broker 1 reports an **Order Fulfillment event*** Type: MEOF eventTimestamp: 20170801T143036.123456 manualFlag: false symbol: XYZ fulfillmentID: FO12350 quantity: 500 price: 10.00 fulfillmentLinkType: Y clientDetails: orderID: O12345 sideIMID: BRK1 side: Buy leavesQty: 0 capacity: Riskless Principal firmDetails: orderID: O12350 sideIMID: BRK1 side: Sell leavesQty: 0 capacity: Principal	The *fulfillmentLinkType* is marked as 'Y' and the *capacity* is 'Riskless Principal', indicating this is a Riskless Principal flip

2.3.3. Customer Order Internally Routed to Another Desk and Subsequently Executed Against a Firm Proprietary Account

This section will illustrate an example of CAT reporting when an Industry Member internally routes a customer order from the sales desk to the trading desk, and subsequently executes against a firm proprietary account. The sales desk and trading desk are separated by information barriers.



In this scenario, Industry Member Broker 1 must report the following events to CAT:

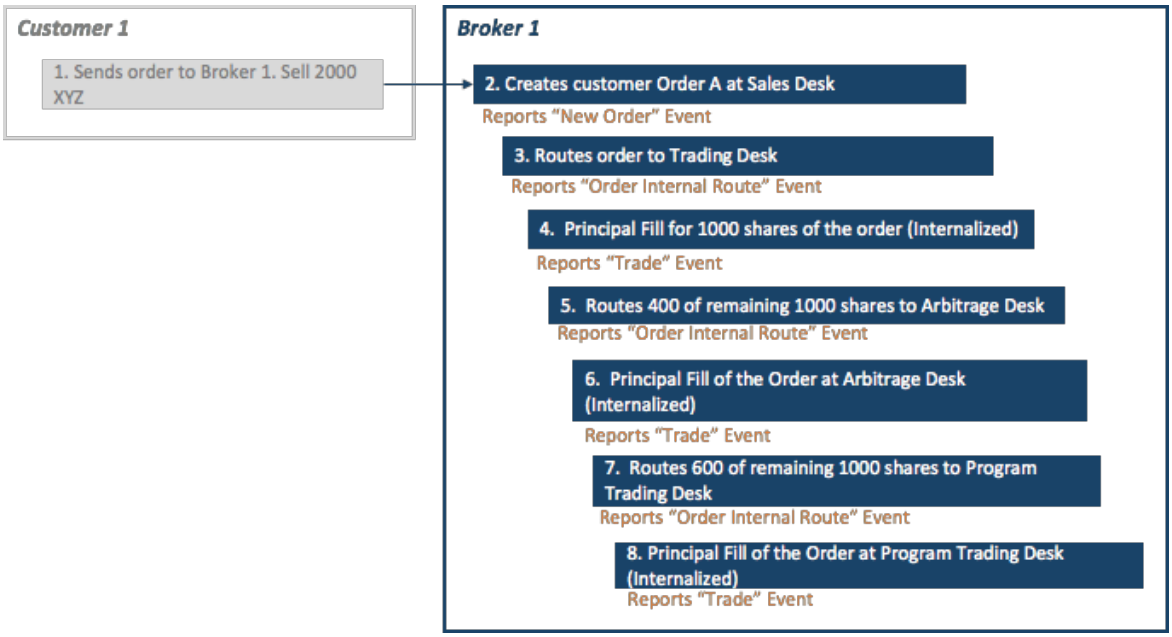
- The receipt of the customer order in a New Order event
- The internal route from the sales desk to the trading desk (Order Internal Route event)
- The principal execution (Trade event)

#	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 eventTimestamp: 20170801T143030.123456 manualFlag: false symbol: XYZ orderID: O12345 deptType: O side: Buy price: 10.01 quantity: 500 orderType: LMT timeInForce: DAY 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 Trading Desk	*Broker 1 reports an **Order Internal Route event*** type: MEIR eventTimestamp: 20170801T143031.123456 manualFlag: false symbol: XYZ priorOrderID: O12345 orderID: O999 deptType: T receivingDeskType: T infoBarrierID: CD34 side: Buy price: 10.01 quantity: 500 orderType: LMT	The trading desk, upon receipt of the internal route, assigns a new order ID O999 to the order. This ID will be used to refer to the order in the subsequent trade event. The order ID from the New Order event, O12345, should be populated in the priorOrderID field. The priorOrderID links the Internal Route with the New Order.

#	Step	Reported Event	Comments
4	The trading desk fills the customer on a Principal basis	*Broker 1 reports a **Trade event*** type: MEOT eventTimestamp: 20170801T143035.123456 manualFlag: false symbol: XYZ tradeID: TO999 quantity: 500 price: 10.01 marketCenterID: DN negotiatedTradeSide: NA buyDetails: orderID: O999 sideIMID: BRKA side: Buy leavesQty: 0 capacity: Principal tapeTradeID: TRF9090 sellDetails: sideIMID: BRKA side: Sell capacity: Principal firmDesignatedID: P123 accountHolderType: P	In this Trade event, the client side is the order received from the customer. The firm side captures the firm's proprietary order.

2.3.4. 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 internally fills the order. Each internal route and execution must be reported separately.



For this scenario, Industry Member Broker 1 is required to report the following events for CAT:

- At the Sales Desk
  - New Order event for the customer order
- At the Trading Desk
  - Order Internal Route event from the sales desk to the trading desk
  - The principal execution as a Trade event
- At the Arbitrage Desk
  - Order Internal Route event from trading desk to the arbitrage desk
  - The principal execution as a Trade event
- At the Program Trading Desk
  - Order Internal Route event from the trading desk to the program trading desk
  - The principal execution as a Trade event

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

#	Step	Reported Event	Comments
2	Broker 1 accepts the customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20170801T143030.123456 manualFlag: false symbol: XYZ orderID: O11111 deptType: O side: Sell price: 10.02 quantity: 2000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: C5678 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 internally routes order from the Sales desk to the Trading Desk	*Broker 1 reports an **Order Internal Route event*** type: MEIR eventTimestamp: 20170801T143031.123456 manualFlag: false symbol: XYZ priorOrderID: O11111 orderID: O9996 deptType: T receivingDeskType: T side: Sell price: 10.02 quantity: 2000 orderType: LMT	The trading desk, upon receipt of the internal route, assigns a new order ID O9996 to the order. This ID will be used to refer to the order in the subsequent trade event. The order ID from the New Order event, O11111, should be populated in the priorOrderID field. The priorOrderID links the Internal Route with the New Order.

#	Step	Reported Event	Comments
4	The trading desk partially fills the order O9996 on Principal basis	*Broker 1 reports a **Trade event*** type: MEOT eventTimestamp: 20170801T143035.123456 manualFlag: false symbol: XYZ tradeID: TO9996 quantity: 1000 price: 10.02 marketCenterID: DN negotiatedTradeSide: NA buyDetails: sideIMID: BRKA side: Buy capacity: Principal firmDesignatedID: PROP246 accountHolderType: P sellDetails: orderID: O9996 sideIMID: BRKA side: Sell leavesQty: 1000 capacity: Principal tapeTradeID: T9996	
5	Broker 1 internally routes 400 of remaining 1000 shares from the Trading Desk to the Arbitrage Desk	*Broker 1 reports an **Order Internal Route event*** type: MEIR eventTimestamp: 20170801T143036.123456 manualFlag: false symbol: XYZ priorOrderID: O9996 orderID: O9997 deptType: T receivingDeskType: AR side: Sell price: 10.02 quantity: 400 orderType: LMT	The arbitrage desk, upon receipt of the internal route, assigns a new order ID O9997 to the order. This ID will be used to refer to the order in the subsequent trade event. The order ID from the Trading Desk O9996, should be populated in the *priorOrderID* field. The *priorOrderID* links the Internal Route with the New Order.

#	Step	Reported Event	Comments
6	The Arbitrage Desk fills the order O9997 on Principal basis.	*Broker 1 reports a **Trade event*** type: MEOT eventTimestamp: 20170801T143037:122234 manualFlag: false symbol: XYZ tradeID: TO9997 quantity: 400 price: 10.02 marketCenterID: DN negotiatedTradeSide: NA buyDetails: sideIMID: BRKA side: Buy capacity: Principal firmDesignatedID: PROP321 accountHolderType: P sellDetails: orderID: O9997 sideIMID: BRKA side: Sell leavesQty: 0 capacity: Principal tapeTradeID: T9997	
7	Broker 1 internally routes 600 remaining shares from the Trading Desk to a Program Desk	*Broker 1 reports an **Order Internal Route event*** type: MEIR eventTimestamp: 20170801T143038.123456 manualFlag: false symbol: XYZ priorOrderID: O9996 orderID: O1118 deptType: T receivingDeskType: PT side: Sell price: 10.02 quantity: 600 orderType: LMT	The program trading desk, upon receipt of the internal route, assigns a new order ID O1118 to the order. This ID will be used to refer to the order in the subsequent trade event. The order ID from the Trading Desk O9996, should be populated in the *priorOrderID* field. The *priorOrderID* links the Internal Route with the New Order.

#	Step	Reported Event	Comments
8	The Program Trading Desk fills the order O1118 on Principal basis	*Broker 1 reports a **Trade event*** type: MEOT eventTimestamp: 20170801T143038:125566 manualFlag: false symbol: XYZ tradeID: TO99981 quantity: 600 price: 10.02 marketCenterID: DN negotiatedTradeSide: NA buyDetails: sideIMID: BRKA side: Buy capacity: Principal firmDesignatedID: PROP555 accountHolderType: P sellDetails: orderID: O1118 sideIMID: BRKA side: Sell leavesQty: 0 capacity: Principal tapeTradeID: T9998	

2.3.5. Internal Route and Execution, Leaves Quantity Routed Externally

This scenario illustrates the reporting requirements to CAT when an Industry Member internally routes an order to another desk where it is partially executed and the remainder is routed to another Industry Member to execute.

Industry Member Broker 1 is required to report the following events:

- New Order event for the customer order
- Order Internal Route from the Sales Desk to the Trading Desk
- Trade event for the partial execution of the customer order
- Order Route of the remaining shares to Broker 2

Industry Member Broker 2 is required to report the following events:

- Order Accepted event for the order from Broker 1
- Trade event for the execution of Broker 1's order

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts customer order A at Sales Desk	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20170801T143030.123456 manualFlag: false symbol: XYZ orderID: O34567 deptType: O side: Buy price: 10.01 quantity: 5000 orderType: LMT timeInForce: DAY tradingSession: REG custDsplIntrFlag: false firmDesignatedID: C0001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 internally routes order to the Trading Desk	*Broker 1 reports an **Order Internal Route event*** type: MEIR eventTimestamp: 20170801T143031.123456 manualFlag: false symbol: XYZ priorOrderID: O34567 orderID: T12333 deptType: T receivingDeskType: T side: Buy price: 10.01 quantity: 5000 orderType: LMT	

#	Step	Reported Event	Comments
4	Trading desk partially executes the order on a principal basis	*Broker 1 reports a **Trade event*** type: MEOT eventTimestamp: 20170801T143032.123456 manualFlag: false symbol: XYZ tradeID: TO9123 quantity: 4000 price: 10.01 negotiatedTradeSide: NA buyDetails: orderID: T12333 sideIMID: BRKA side: Buy leavesQty: 1000 capacity: Principal tapeTradeID: TRF1234 sellDetails: sideIMID: BRKA side: Sell capacity: Principal firmDesignatedID: PROP123 accountHolderType: P	
5	Broker 1 routes the leaves quantity to Broker 2	Broker 1 reports an ***Order Route event*** type: MEOR eventTimestamp: 20170801T143033.123456 manualFlag: false symbol: XYZ senderIMID: BRKA destination: FIRMB destinationType: F orderID: T12333 routedOrderID: FA12333 side: Buy price: 10.01 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	Since the Trading desk is routing the order, it uses the *orderID* = T12333 which was assigned to the order at the time the desk received it

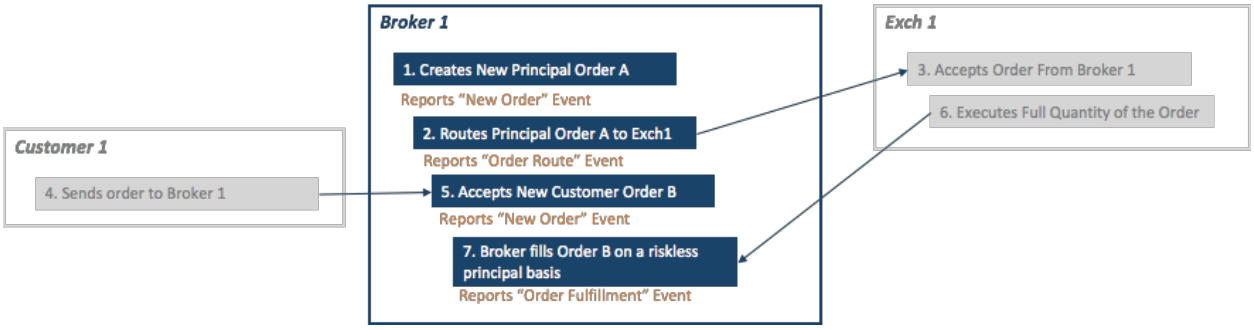
#	Step	Reported Event	Comments
6	Broker 2 accepts order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA eventTimestamp: 20170801T143033.523456 manualFlag: false symbol: XYZ orderID: B12345 receiverIMID: FIRMB routingOrigin: BRKA routingOriginType: F routedOrderID: FA12333 affiliateFlag: false deptType: T side: Buy price: 10.01 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	
7	Broker 2 executes trade (assumption: Broker 2 has matching trade, Order ID C45678 from another sender)	*Broker 2 reports a **Trade event*** type: MEOT eventTimestamp: 20170801T143034.253456 manualFlag: false symbol: XYZ tradeID: TXYZ001 quantity: 1000 price: 10.01 marketCenterID: DN negotiatedTradeSide: NA buyDetails: orderID: B12345 sideIMID: BRKA side: Buy leavesQty: 0 capacity: Agency tapeTradeID: TRF123 sellDetails: orderID: C45678 sideIMID: FIRMX side: Sell leavesQty: 0 capacity: Agency tapeTradeID: TRF987	

2.3.6. Fill of a Customer Order from a Pre-Existing Principal Order

This scenario illustrates the reporting requirements to CAT for an Industry Member that creates a new principal order and routes it to an exchange. Before execution of the principal order, 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.

For this scenario, Industry Member Broker 1 is required to report the following events:

- The creation of a new principal order (New Order event)
- Route the principal order to an exchange via an Order Route event
- The receipt of a customer order (New Order event)
- Fill of the customer order with the executed principal order via an Order Fulfillment event



#	Step	Reported Event	Comments
1	Broker 1 creates a New Order (Order A)	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180501T153035.234456 manualFlag: false symbol: XYZ orderID: O12345 deptType: T side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: PRO001 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	A new principal order is created

#	Step	Reported Event	Comments
2	Broker 1 routes Order A to Exch 1	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180501T153035.234556 manualFlag: false symbol: XYZ senderIMID: FRMA destination: EXCH1 destinationType: E orderID: O12345 routedOrderID: AO123 session: s5 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The following fields must match the corresponding elements on the Participant Order Accepted event reported by EXCH1 (listed on the right side). The following fields will be used to create linkages. • date: 20180501 • symbol: XYZ • senderIMID: FRMA • destination: EXCH1 • routedOrderID: AO123 • session: s5
3	Exch 1 accepts Order A from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
4	Customer sends an order to Broker 1 (Order B)	*NA - Customer does not have CAT reporting obligation*	
5	Broker 1 accepts customer order (Order B)	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180501T153035.634456 manualFlag: false symbol: XYZ orderID: O34567 deptType: T side: Buy price: 10.00 quantity: 800 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
6	Exch 1 executes full quantity (1000) of Order A	*Exch 1 reports a Participant **Trade event***	

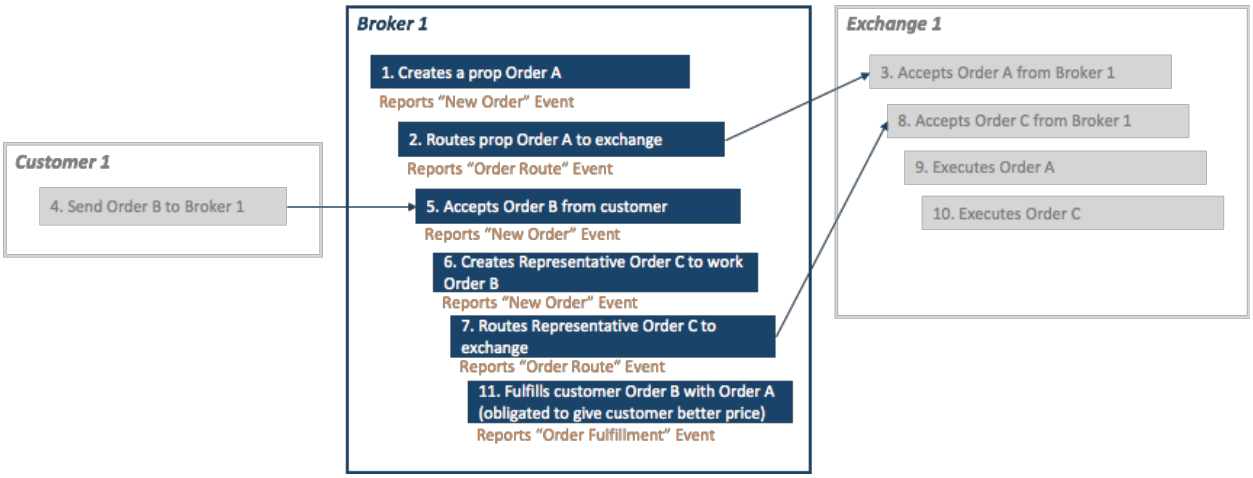
#	Step	Reported Event	Comments
7	Broker 1 executes Order B on a riskless principal basis	*Broker 1 reports an* ***Order Fulfillment event*** type: MEOF eventTimestamp: 20180501T153035.653456 manualFlag: false symbol: XYZ fulfillmentID: FXYZ111 quantity: 800 price: 10.00 fulfillmentLinkType: YP clientDetails: orderID: O34567 sideIMID: FRMA side: Buy leavesQty: 0 capacity: Riskless Principal firmDetails: orderID: O12345 sideIMID: FRMA side: Sell leavesQty: 200 capacity: Principal	Broker 1 uses the shares received from the executed principal order to fill the customer order. In this case, the firm side is selling to the customer. The *fulfillmentLinkType* = 'YP' to indicate linkage is required and it is a fill of a pre-existing order.

2.3.7. Fill of a Customer Order from a Pre-Existing Principal Order with Better Price than the Representative Order

This scenario illustrates the reporting requirements to CAT for an Industry Member that creates and routes a representative order to work a customer order, but ultimately fills the customer order with an existing principal order that executed at a better price.

For this scenario, Industry Member Broker 1 is required to report the following events:

- A New Order event for the creation of the principal order
- The route of the principal order to the exchange (Order Route event)
- The receipt of the customer order as a New Order event
- The creation of the representative order as a New Order event
- The route of the representative order to the exchange as an Order Route event
- An Order Fulfillment event for the fill of the customer order against the principal order



#	Step	Reported Event	Comments
1	Broker 1 creates a New Order (Order A)	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180501T153035.123456 manualFlag: false symbol: XYZ orderID: O12345 deptType: T side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: GTC tradingSession: REG custDsplIntrFlag: false firmDesignatedID: PRO001 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	A new principal order is created

#	Step	Reported Event	Comments
2	Broker 1 routes prop Order A to the exchange	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180501T153035.234556 manualFlag: false symbol: XYZ senderIMID: BRKR1 destination: EXCH1 destinationType: E orderID: O12345 routedOrderID: AO123 session: s5 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: GTC tradingSession: REG isoInd: NA	The following fields must match the corresponding elements on the Participant Order Accepted event reported by EXCH1. The following fields will be used to create linkages. • date: 20180501 • symbol: XYZ • senderIMID: BRKR1 • destination: EXCH1 • routedOrderID: AO123 • session: s5
3	Exch 1 accepts Order A from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
4	Customer sends an order to Broker 1 (Order B)	*NA*	
5	Broker 1 accepts customer order (Order B)	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180501T153040.123456 manualFlag: false symbol: XYZ orderID: OB6789 deptType: A side: Buy price: 10.00 quantity: 800 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	

#	Step	Reported Event	Comments
6	Broker 1 creates a representative order (Order C)	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180501T153040.123656 manualFlag: false symbol: XYZ orderID: OF54321 deptType: A side: Buy price: 10.00 quantity: 800 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: PR002 accountHolderType: P affiliateFlag: false aggregatedOrders: OB6789 negotiatedTradeFlag: false representativeInd: Y	
7	Broker 1 routes the representative order to the exchange (Order C)	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180501T153040.134556 manualFlag: false symbol: XYZ senderIMID: BRKR1 destination: EXCH1 destinationType: E orderID: OF54321 routedOrderID: AO678 session: s5 side: Buy price: 10.00 quantity: 800 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The following fields must match the corresponding elements on the Participant Order Accepted reported by EXCH1. The following fields are used to create linkages. • date: 20180501 • symbol: XYZ • senderIMID: BRKR1 • destination: EXCH1 • routedOrderID: AO678 • session: s5
8	Exch 1 accepts Order C from Broker 1	*Exch 1 reports a Participant **Order Accepted event***	
9	Exch 1 executes Order A @ 9.95	*Exch 1 reports a Participant **Trade event***	
10	Exch 1 executes Order C @ 9.96	*Exch 1 reports a Participant **Trade event***	

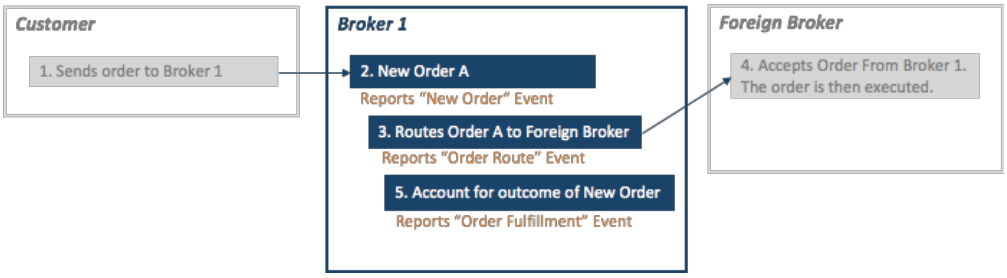
#	Step	Reported Event	Comments
11	Broker 1 fills customer Order B with Order A on a Riskless Principal basis	*Broker 1 reports an **Order Fulfillment event*** type: MEOF eventTimestamp: 20180501T153042.123456 manualFlag: false symbol: XYZ fulfillmentID: FXYZ001 quantity: 800 price: 9.95 fulfillmentLinkType: YP clientDetails: orderID: OB6789 sideIMID: BRKR1 side: Buy leavesQty: 0 capacity: Riskless Principal firmDetails: orderID: O12345 sideIMID: BRKR1 side: Sell leavesQty: 200 capacity: Principal	While Broker 1 had created a representative order (Order C) linked to the customer order (Order B), the order fulfillment must capture how the order was actually filled (by Order A). In this case, the firm side is selling to the customer. The *fulfillmentLinkType* = 'YP' to indicate linkage is required and it is a fill of a pre-existing order.

2.3.8. Route to Foreign Broker

This scenario illustrates the reporting requirements to CAT for an Industry Member (Broker 1) that routes an order to a foreign broker-dealer. Because the foreign broker dealer is not a CAT reporter, Broker 1 must report an Order Fulfillment event to represent the outcome of the customer order.

For this scenario, Industry Member Broker 1 is required to report the following events:

- A New Order event for the receipt of customer order
- An Order Route event for the routing of the order to the foreign broker
- An Order Fulfillment event to show the executed shares given back to the customer



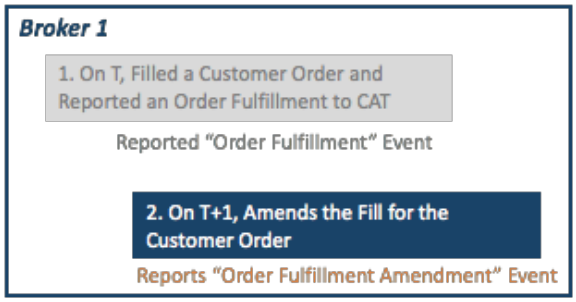
#	Step	Reported Event	Comments
1	Customer sends an order to Broker 1	*NA*	
2	Broker 1 creates a New Order (Order A)	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180501T153035.234456 manualFlag: false symbol: XYZ orderID: O12345 deptType: A side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: FOR custDspIntrFlag: false firmDesignatedID: EFGHO001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	• A new order is created and assigned Order ID O12345
3	Broker 1 routes Order A to Foreign Broker	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180501T153035.234556 manualFlag: false symbol: XYZ senderIMID: FRMA destinationType: N orderID: O12345 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: FOR isoInd: NA	
4	Non-reporting Foreign Broker-Dealer accepts and executes order	*NA*	

#	Step	Reported Event	Comments
5	Broker 1 reports an Order Fulfillment event to show the outcome of the customer order	*Broker 1 reports an **Order Fulfillment event*** type: MEOF eventTimestamp: 20180417T153506.123456 symbol: XYZ fulfillmentID: FRGN123 quantity: 1000 price: 10.00 fulfillmentLinkType: FOR clientDetails: orderID: O12345 sideIMID: FRMA side: Buy leavesQty: 0 capacity: Agency	In this scenario, the *fulfillmentLinkType* must be marked as FOR (foreign) since there is no requirement to report firmDetails

2.3.9. Order Fulfillment Amendment

In the following scenario, the Industry Member amends the price of a customer fill that was reported to CAT on a previous day.

For this scenario, Industry Member Broker 1 is only required to report an Order Fulfillment Amendment event for T+1.



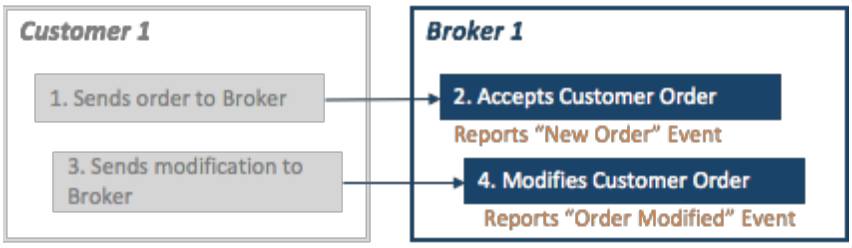
Note that the amendment reporting is only applicable to Order Fulfillment events, not the events reported to the TRF for media dissemination (which would have originally been reported as Trade events).

#	Step	Reported Event	Comments
1	On day T, Broker 1 accepted a customer order and filled the order as Riskless Principal	*Broker 1 (IMID = FRMA) reports an **Order Fulfillment event*** type: MEOF eventTimestamp: 20180417T153035.326456 manualFlag: false symbol: XYZ fulfillmentID: AABB1231 quantity: 500 price: 9.99 fulfillmentLinkType: YP clientDetails: orderID: O12345 sideIMID: FRMA side: Buy leavesQty: 0 capacity: RisklessPrincipal firmDetails: orderID: O999 sideIMID: FRMA side: Sell leavesQty: 0 capacity: Principal	Note that this example is for the purpose of illustrating an amendment of the Order Fulfillment on a previous day. It does not include the details of order handling on the original day.
2	On T+1, Broker 1 amends the fills for the customer order	*On T+1, Broker 1 reports an **Order Fulfillment Amendment event*** type: MEFA eventTimestamp: 20180418T104501.123456 manualFlag: false symbol: XYZ fulfillmentID: AACC1231 priorFulfillmentDate: 20180417 priorFulfillmentID: AABB1231 quantity: 500 price: 9.98 fulfillmentLinkType: YP clientDetails: orderID: O12345 sideIMID: FRMA side: Buy leavesQty: 0 capacity: RisklessPrincipal firmDetails: orderID: O999 sideIMID: FRMA side: Sell leavesQty: 0 capacity: Principal	The amendment of the fulfillment references the original fulfillment date and fulfillmentID assigned on that date

2.4. Order Modification Scenarios

2.4.1. Customer Order and Modification

This scenario illustrates the reporting requirements to CAT for an Industry Member for a customer initiated modification on an order.



For this scenario, Industry Member Broker 1 is required to report the following events:

- New Order event for the customer order
- Order Modified event upon receipt of customer request

#	Step	Reported Event	Comments
1	Customer sends order to Broker 1	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T143030.234456 manualFlag: false symbol: XYZ orderID: O12321 deptType: T side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: IN004 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Customer sends the modification request to the Broker	*NA*	

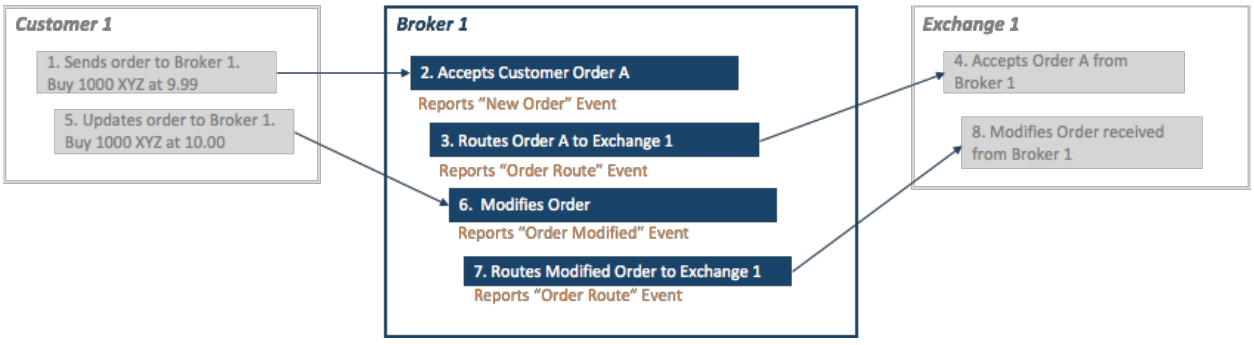
#	Step	Reported Event	Comments
4	The customer order is modified at the firm	*Broker 1 reports an **Order Modified event*** type: MEOM eventTimestamp: 20180417T143030.236456 manualFlag: false symbol: XYZ orderID: OM12322 priorOrderID: O12321 initiator: Customer side: Buy price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDsplntrFlag: false	The Order Modified event must reference the priorOrderID O12321. Field *initiator* must be marked as Customer

2.4.2. Customer Initiated Modification of Order Previously Routed to Exchange

This scenario illustrates a customer-initiated modification of an order which the Industry Member had previously routed to an exchange.

In this scenario, Industry Member Broker 1 is required to report the following events to CAT:

- A New Order event for the receipt of customer order
- Order Route event for the route to the exchange
- An Order Modification event
- A second Order Route event for the route of the modified order to the exchange



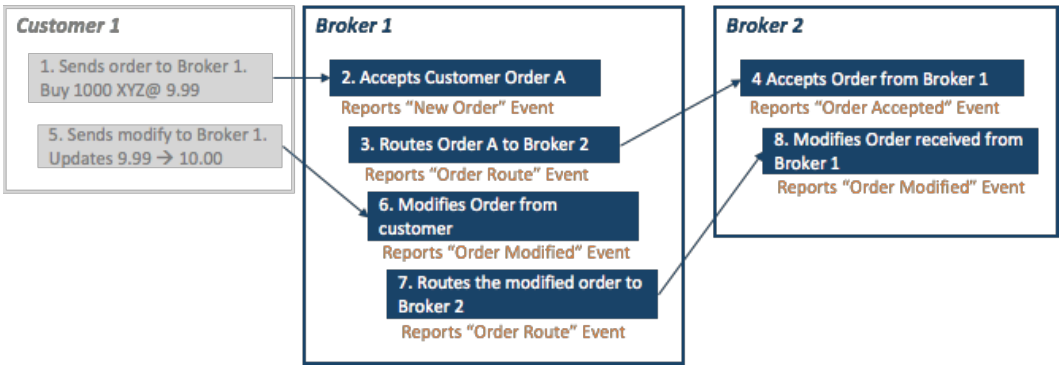
#	Step	Reported Event	Comments
1	Customer sends order to Broker 1	*NA*	

#	Step	Reported Event	Comments
2	Broker 1 accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T143030.234456 manualFlag: false symbol: XYZ orderID: O12321 deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: IN004 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 routes order to EXCH1	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T143030.236456 manualFlag: false symbol: XYZ senderIMID: FRMA destination: EXCH1 destinationType: E orderID: O12321 routedOrderID: RTAO12321 session: s6 side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The following data elements are used to link to Exchange 2 Participant Order Accepted event. The values must match the corresponding fields reported by the exchange. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: FRMA • destination: EXCH1 • routedOrderID: RTAO12321 • session: s6
4	EXCH1 accepts order from Broker 1	*Exchange 1 reports a Participant **Order Accepted event***	
5	Customer modifies order	*NA*	

#	Step	Reported Event	Comments
6	Customer order at the firm is updated per customer's instructions	*Broker 1 reports an **Order Modified event*** type: MEOM eventTimestamp: 20180417T143031.236456 manualFlag: false symbol: XYZ orderID: OM12322 priorOrderID: O12321 initiator: Customer side: Buy price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDsplntrFlag: false	
7	Broker 1 sends a route to EXCH1 to update previously sent details	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T143031.254456 manualFlag: false symbol: XYZ senderIMID: FRMA destination: EXCH1 destinationType: E orderID: OM12322 routedOrderID: RTAO555 session: s6 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The following data elements are used to link to Exchange 2 Participant Order Accepedt event. The values must match the corresponding fields reported by the exchange. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: FRMA • destination: EXCH1 • routedOrderID: RTAO555 • session: s6
8	EXCH1 updates order	*Exchange 1 reports a Participant **Order Modified event***	

2.4.3. Customer Initiated Modification of Order Previously Routed to Another Industry Member

This scenario illustrates the reporting requirements to CAT for two Industry Members when a customer of the first Industry Member initiates a modify on an order. The example shown does not illustrate events that would occur following the second Order Route event to account for the New Order and Order Accepted events, such as cancellations, trades, or fulfillments.



For this scenario, Industry Member Broker 1 is required to report the following events:

- New Order event for the customer order
- Order Route event for the routing of the order to Broker 2
- Order Modified event for customer initiated modification
- Order Route event for the routing of the modified order to Broker 2

For this scenario, Industry Member Broker 2 is required to report the following events:

- Order Accepted event for the received client order from Broker 1
- Order Modified event upon receiving the modify notice from Broker 1

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T143035.234456 manualFlag: false symbol: XYZ orderID: O23456 deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDsplIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	• Broker 1 receives the customer order and assigns it an internal orderID: O23456

#	Step	Reported Event	Comments
3	Broker 1 routes order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T143035.234556 manualFlag: false symbol: XYZ senderIMID: FRMA destination: FRMB destinationType: F orderID: O23456 routedOrderID: AO222 side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The following data elements are used to link to Broker 2 Order Accepted event. The values must match the corresponding fields as shown in step #4 below. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: FRMA • destination: FRMB • routedOrderID: AO222 Since Broker 1 is routing to another Industry Member, *session* must not be populated.
4	Broker 2 accepts client order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T143035.323556 manualFlag: false symbol: XYZ orderID: O34567 receiverIMID: FRMB routingOrigin FRMA routingOriginType: F routedOrderID: AO222 affiliateFlag: false deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	The following data elements are used to link to Broker 1 Order Route event. The values must match the corresponding fields as shown in step #3 above. • Date (from eventTimestamp):20180417 • symbol: XYZ • receiverIMID: FRMB • routingOrigin: FRMA • routedOrderID: AO222 Since Broker 2 is receiving the order from another Industry Member, *session* must not be populated.
5	Customer sends modification order to Broker 1	*NA*	• Customer amends order to price of $10.00

#	Step	Reported Event	Comments
6	Customer order at the firm is updated per customer's instructions	*Broker 1 reports an **Order Modified event*** type: MEOM eventTimestamp: 20180417T143032.224333 manualFlag: false symbol: XYZ orderID: O23456M priorOrderID: O23456 initiator: Customer side: Buy price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	• All order details are restated even though only price is changed • A new *orderID* is used, the *priorOrderID* matches the *orderID* reported in the New Order event • The *initiator* field indicates that the price is modified due to a customer request
7	Broker 1 sends a route to Broker 2 to update previously sent details	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T143032.234333 manualFlag: false symbol: XYZ senderIMID: FRMA destination: FRMB destinationType: F orderID: O23456M routedOrderID: MAO222 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The following data elements are used to link to Broker 2 Order Modified event. The values must match the corresponding fields as shown in step #8 below. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: FRMA • destination: FRMB • routedOrderID: MAO222 Since Broker 1 is routing to another Industry Member, *session* must not be populated.

#	Step	Reported Event	Comments
8	Broker 2 receives the order modification and updates details reported in the Order Accepted event	*Broker 2 reports an **Order Modified event*** type: MEOM eventTimestamp: 20180417T143035.524333 manualFlag: false symbol: XYZ orderID: O34567M priorOrderID: O34567 receiverIMID: FRMB routingOrigin: FRMA routingOriginType: F routedOrderID: MAO222 initiator: Customer side: Buy price: 10.00 quantity: 1000 leavesQty: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	Broker 2 reports an Order Modified event to show a modification of order details from the Order Accepted event previously reported. The following data elements are used to link to Broker 1 Order Route event. The values must match the corresponding fields as shown in step #7 above. • Date (from eventTimestamp):20180417 • symbol: XYZ • receiverIMID: FRMB • routingOrigin: FRMA • routedOrderID: MAO222 Since Broker 2 received the order modification from another Industry Member, *session* must not be populated.

2.4.4. System Driven Modification of Previously Routed Order

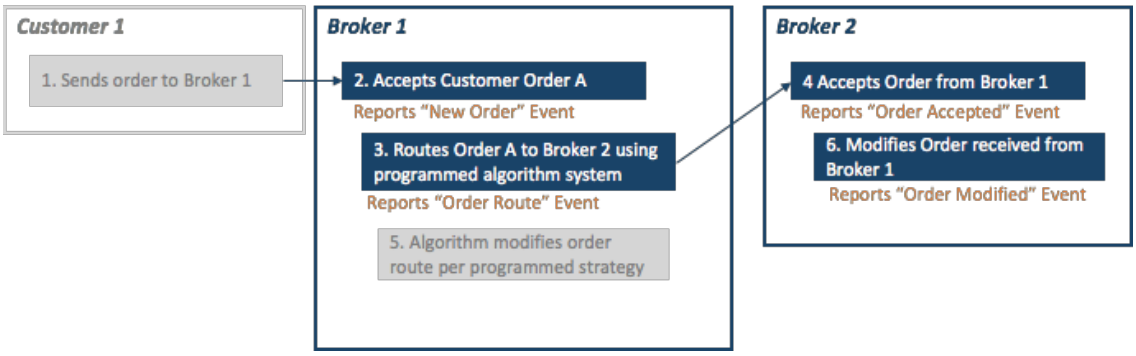
This scenario illustrates the reporting requirements to CAT for two Industry Members when the Industry Member sending an order uses a programmed algorithmic system, which modifies the order routes. Since the order modification is determined by the algorithm and not by the sending Industry Member, the sending Industry Member does not need to report subsequent Order Route events. The modifications driven by the algorithm are captured by the receiving Industry Member in an Order Modified event.

For this scenario, sending Industry Member Broker 1 is required to report the following events:

- New Order event for the accept of the customer order
- Order Route event for the routing of the order to Broker 2

For this scenario, receiving Industry Member Broker 2 is required to report the following events:

- Order Accepted event for the received order from Broker 1
- Order Modified event upon receiving the modify from Broker 1



#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts order from the customer	*Broker 1 reports a* ***New Order event*** type: MENO eventTimestamp: 20180417T143035.234456 manualFlag: false symbol: XYZ orderID: O23456 deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: Fe custDspIntrFlag: false firmDesignatedID: PR001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	

#	Step	Reported Event	Comments
3	Broker 1 routes order (500 shares) to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T143035.234556 manualFlag: false symbol: XYZ senderIMID: FRMA destination: FRMB destinationType: F orderID: O23456 routedOrderID: AO222 side: Buy price: 9.98 quantity: 500 orderType: LMT timeInForce: GTT tradingSession: REG isoInd: NA handlingInstructions: SMT | XTIME= 20180417T143036.000000	The following data elements are used to link to Broker 2 Order Accept event. The values must match the corresponding fields as shown in step #3 below. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: FRMA • destination: FRMB • routedOrderID: AO222 Since Broker 1 is routing to another Industry Member, *session* must not be populated. The order route is a Good til Time order. This requires *timeInForce* = GTT with the expire timestamp included as a Name/Value "XTIME" in the *handlingInstuctions* field.
4	Broker 2 accepts order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T143035.323556 manualFlag: false symbol: XYZ orderID: O34567 receiverIMID: FRMB routingOrigin: FRMA routingOriginType: F routedOrderID: AO222 affiliateFlag: false deptType: A side: Buy price: 9.98 quantity: 500 orderType: LMT timeInForce: GTT tradingSession: REG isoInd: NA handlingInstructions: SMT | XTIME= 20180417T143036.000000 custDspIntrFlag: false	The following data elements are used to link to Broker 1 Order Route event. The values must match the corresponding fields as shown in step #2 above. • Date (from eventTimestamp):20180417 • symbol: XYZ • receiverIMID: FRMB • routingOrigin: FRMA • routedOrderID: AO222 Since Broker 2 received the order from another Industry Member, *session* must not be populated.
5	Broker 1's algorithmic system reduces quantity to 300 shares	*NA*	

#	Step	Reported Event	Comments
6	Broker 2 modifies order details	*Broker 2 reports an* ***Order Modified event*** type: MEOM eventTimestamp: 20180417T143035.524333 manualFlag: false symbol: XYZ orderID: O34567M priorOrderID: O34567 initiator: Customer side: Buy price: 9.98 quantity: 300 leavesQty: 300 orderType: LMT timeInForce: GTT tradingSession: REG isoInd: NA handlingInstructions: SMT | XTIME= 20180417T143036.000000 custDspIntrFlag: false	• Broker 2 reports an Order Modified event to show a modification of order details from the Order Accepted event previously reported

2.4.5. Order Modification of a PEG Order by a Display ATS

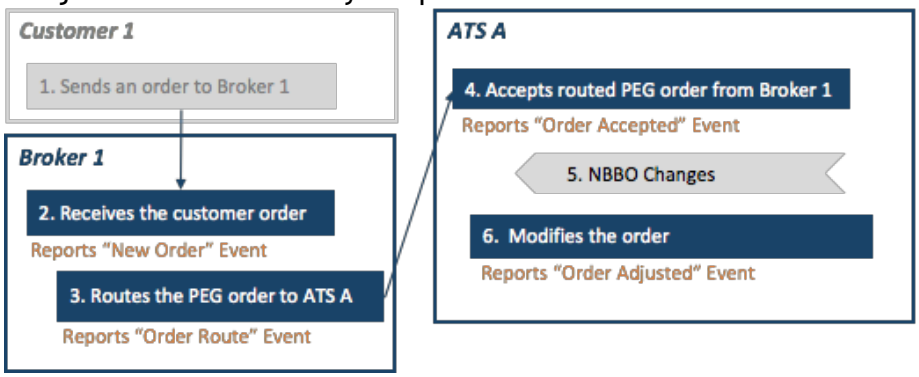
This section will show how an Order Adjusted Event is reported when a display ATS reprices a peg order. Per CAT FAQ #H1, each time an Industry Member reprices a peg order based on a market move (i.e., when there is a change in the national best bid or offer or the best bid or offer on a particular exchange, 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 is required to be reported to CAT.

Industry Member Broker 1 in this case is required to report:
- The receipt of customer order (New Order event)
- The route of the order to the ATS in an Order Route event

ATS A must report:
- An Order Accepted event for the receipt of the PEG order from Broker 1

- The modification of the price due to NBBO changes - this should be reported using an Order Adjusted Event with only the price fields restated



#	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 eventTimestamp: 20170801T143030.123456 manualFlag: false symbol: XYZ orderID: O12345 deptType: A side: Buy price: 10.10 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: M custDspIntrFlag: false firmDesignatedID: C123 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	

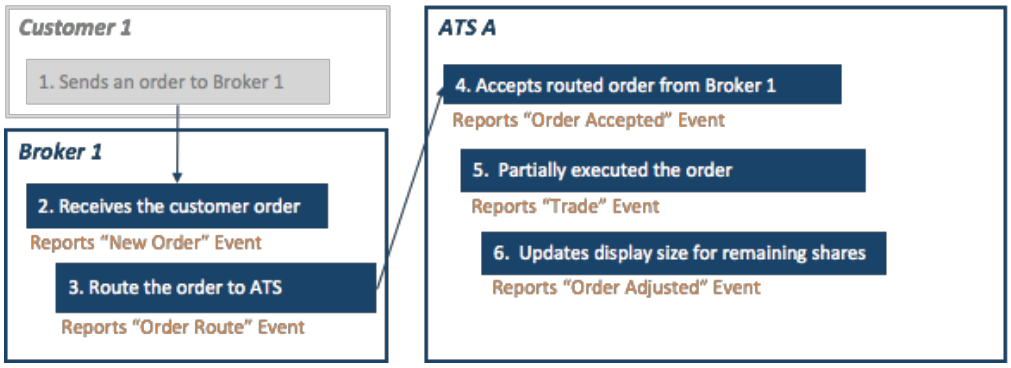
#	Step	Reported Event	Comments
3	Broker 1 routes the PEG order to ATS A	*Broker 1 reports an **Order Route Event*** type: MEOR eventTimestamp: 20170801T143030.623456 manualFlag: false symbol: XYZ senderIMID: BRK1 destination: ATSA destinationType: F orderID: O12345 routedOrderID: S12O12345 side: Buy price: 10.10 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA handlingInstructions: M	The following data elements are used to link to ATS A Order Accepted event. The values must match the corresponding fields as shown in step #4 below. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: FRMA • destination: ATSA • routedOrderID: S12O12345 Since Broker 1 is routing to another Industry Member, *session* must not be populated.
4	The ATS accepts the routed order from Broker 1	*ATS A reports an **Order Accepted Event*** type: MEOA eventTimestamp: 20170801T143031.123456 manualFlag: false symbol: XYZ orderID: O999 receiverIMID: ATSA routingOrigin: BRK1 routingOriginType: F routedOrderID: S12O12345 affiliateFlag: false deptType: ATS side: Buy price: 10.10 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA handlingInstructions: M custDspIntrFlag: false seqNum: 1008 workingPrice: 10.07 atsOrderType: MPEG nbbPrice: 10.05 nbbQty: 500 nboPrice: 10.09 nboQty: 300	Upon receipt of the order, the ATS assigns a working price to the order based on the market condition. The ATS must capture the NBBO, the source of NBBO, as well as the timestamp when the NBBO is captured. The following data elements are used to link to Broker 1 Order Route event. The values must match the corresponding fields as shown in step #3 above. • Date (from eventTimestamp):20180417 • symbol: XYZ • receiverIMID: ATSA • routingOrigin: BRK1 • routedOrderID: S12O12345 Since the ATS received the order from another Industry Member, *session* must not be populated.

#	Step	Reported Event	Comments
		nbboSource:SIP nbboTimestamp: 20170801T143031.123456	
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 eventTimestamp: 20170801T143031.623456 manualFlag: false symbol: XYZ orderID: O1001 priorOrderID: O999 initiator: Firm side: Buy price: 10.10 seqNum: 1200 workingPrice: 10.065 nbbPrice: 10.05 nbbQty: 400 nboPrice: 10.08 nboQty: 1000 nbboSource: SIP	The ATS must use the Order Adjusted event for price adjustments.

#	Step	Reported Event	Comments
		nbboTimestamp: 20170801T143031.603456	

2.4.6. Display Modifications of a Display ATS

Display modifications can be reported to CAT using the Order Adjusted event. This scenario illustrates the 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. The sending Industry Member Broker 1 is required to report:

- Receipt of the order from the customer in a New Order event
- An Order Route event of the order route to ATS A

ATS A is required to report:

- An Order Accepted event for the receipt of the order routed from Broker 1
- Partial execution of the order as a Trade Event
- Update to the display size post execution as an Order Adjusted event

Note that ATS A and Broker 1 may have subsequent order handlings on the order. This example is to illustrate the display modification reporting only, so not all possible steps are shown here.

#	Step	Reported Event	Comments
1	Customer sends order to Broker 1, display quantity of 1000	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20170801T143030.123456 manualFlag: false symbol: XYZ orderID: O34567 deptType: A side: Buy price: 10.00 quantity: 10000 minQty: 100 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: RSV | DISQ = 1000 custDspInstFlag: true firmDesignatedID: CUS999 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Order was received with a display quantity instruction from the customer, which is represented in the handlingInstruction DISQ = 1000.
3	Broker 1 routes order to ATS	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20170801T143030.323456 manualFlag: false symbol: XYZ senderIMID: BRKR1 destination: ATSA destinationType: F orderID: O34567 routedOrderID: RTO34567 side: Buy price: 10.00 quantity: 10000 minQty: 100 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	

#	Step	Reported Event	Comments
		handlingInstructions: RSV | DISQ = 1000	

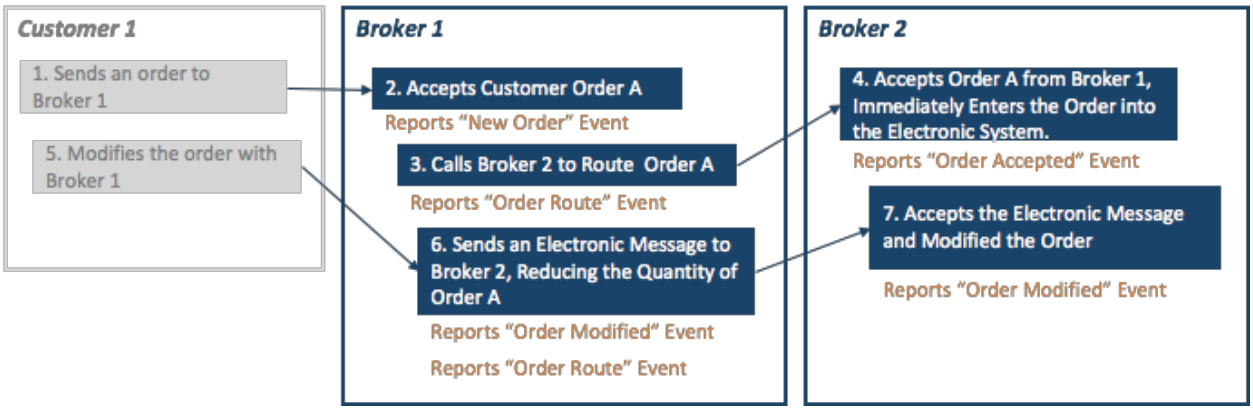
#	Step	Reported Event	Comments
4	ATS accepts order from Broker 1	*ATS A reports an **Order Accepted event*** type: MEOA eventTimestamp: 20170801T143030.343456 manualFlag: false symbol: XYZ orderID: O27272 receiverIMID: ATSA routingOrigin: BRKR1 routingOriginType: F routedOrderID: RTO34567 affiliateFlag: false deptType: ATS side: Buy price: 10.00 quantity: 10000 minQty: 100 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA handlingInstructions: RSV | DISQ = 1000 custDspIntrFlag: false seqNum: 15019 displayPrice: 10.00 workingPrice: 10.00 displayQty: 1000 atsOrderType: RSVA nbbPrice: 9.96 nboPrice: 10.02 nbboSource: SIP nbboTimestamp: 20170801T143030.343456	

#	Step	Reported Event	Comments
5	ATS partially executes the order	*ATS A reports a **Trade event*** type: MEOT eventTimestamp: 20170801T143030.543456 manualFlag: false symbol: XYZ tradeID: TO555 quantity: 800 price: 10.00 marketCenterID: DN negotiatedTradeSide: NA buyDetails: orderID: O27272 sideIMID: BRKR1 side: Buy leavesQty: 9200 capacity; Agency tapeTradeID: TTI23456 sellDetails: orderID: O54321 sideIMID: BRKR5 side: Sell leavesQty: 0 capacity: Agency tapeTradeID: TTI70123 seqNum: 15201 nbbPrice: 10.00 nboPrice: 10.02 nbboSource: SIP nbboTimestamp: 20170801T143030.543455	ATS matched with sell order ID O54321
6	ATS updates the order with new display price	*ATS A reports an **Order Adjusted event*** type: MEOJ eventTimestamp: 20170801T143030.543856 manualFlag: false symbol: XYZ orderID: O27272 priorOrderID: O27272 initiator: Firm side: Buy quantity: 9200 minQty: 100 leavesQty: 9200 seqNum: 15285 displayQuantity: 200 nbbPrice: 10.00 nboPrice: 10.02 nbboSource: SIP	The ATS adjusted the display quantity to 200 after the execution

#	Step	Reported Event	Comments
		nbboTimestamp: 20170801T143030.543855	

2.4.7. Manual Route, Followed by an Electronic Modification

This scenario illustrates the Phase 2a reporting requirement to CAT when an order is initially routed manually between two Industry Members, and then an electronic message is sent to modify the material terms of the order.



In this scenario, Industry Member Broker 1 must report:

- Receipt of the customer order in a New Order event
- Manual route of the order to Broker 2 (Order Route event)
- Order Modified event for reducing the quantity of the order
- Route of the modified order to Broker 2 (Order Route event)

The following must be reported by Industry Member Broker 2:

- Receipt of the manual route from Broker 1 (Order Accepted event)
- An Order Modified event for reducing quantity of the order (Order Modified event)

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T143035.234456 manualFlag: false symbol: XYZ orderID: O23456 deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Broker 1 receives the customer order and assigns it internal orderID: O23456
3	Broker 1 calls Broker 2 to route the order	*Broker 1 reports an **Order Route event*** type: MEOR firmROEID: M12360 eventTimestamp: 20180417T143058 manualFlag: true symbol: XYZ senderIMID: BRK1 destination: BRK2 destinationType: F orderID: O23456 side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The eventTimestamp is the time when manual route happens, only required to be at the granularity of a second. The routedOrderID is not required.

#	Step	Reported Event	Comments
4	Broker 2 immediately enters the order into the electronic system.	*Broker 2 reports an **Order Accepted event*** Type: MEOA firmROEID: MYORDERID001 eventTimestamp: 20180417T143059.123456 manualFlag: true symbol: XYZ orderID: B2O908 receiverIMID: BRK2 routingOrigin: BRK1 routingOriginType: F affiliateFlag: false deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	Since Broker 2 directly enters the order into the electronic system, the eventTimestamp is the time captured by the electronic system, must be reported to the milli-second granularity. The electronicTimestamp is not present. RoutedOrderID is not available.
5	Customer modifies the order with Broker 1 to reduce the order quantity.	NA	

#	Step	Reported Event	Comments
5	Broker 1 reduces the quantity of the order and sends an electronic message to Broker 2 to modify the previously routed order.	*Broker 1 reports an **Order Modified event*** type: MEOM eventTimestamp: 20180417T143110.123456 manualFlag: false symbol: XYZ orderID: O34567M priorOrderID: O23456 initiator: Customer side: Buy price: 10.00 quantity: 900 leavesQty: 900 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false *Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T143110.129456 manualFlag: false symbol: XYZ senderIMID: BRKR1 destination: BRKB2 destinationType: F orderID: O34567M routedOrderID: RTO34567 side: Buy price: 9.99 quantity: 900 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	Broker 1 must report an Order Modified event with the updated material terms of order. In the Order Route message, Broker 1 must report the senderIMID, destinationIMID and routedOrderID for linkage. The following fields will be used to generate the linkage key: •date: 20180417 •symbol: XYZ •senderIMID: BRKR1 •destination: BRKB2 •routedOrderID: RTO34567

#	Step	Reported Event	Comments
6	Broker 2, upon receipt of the modification, partially cancels the order.	*Broker 2 reports an **Order Modified event*** type: MEOM eventTimestamp: 20180417T143110.140456 manualFlag: false symbol: XYZ orderID: O99101 priorOrderID: B2O908 receiverIMID: BRK2 routingOrigin: BRK1 routingOriginType: F routedOrderID: RTO34567 initiator: Customer price: 9.99 quantity: 900 leavesQty: 900 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	The following fields will be used to link to the message reported by the sender. • date: 20180417 • symbol: XYZ • receiverIMID: BRK2 • routingOrigin: BRK1 • routedOrderID: RTO34567

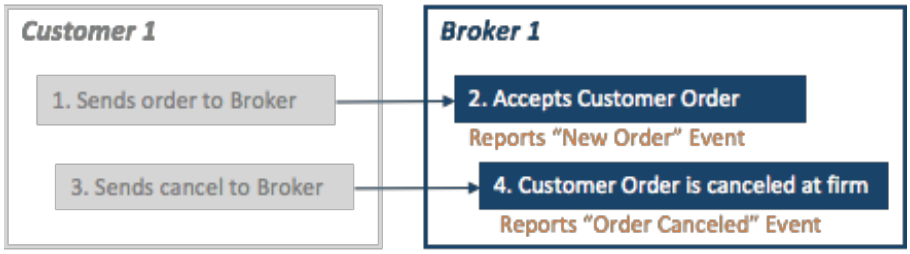
2.5. Cancellation Scenarios

2.5.1. Order Canceled

This scenario illustrates the reporting requirements to CAT for an Industry Member when a customer order is canceled on the same day as the order was created.

For this scenario, Industry Member Broker 1 is required to report the following events:

- New Order event for the customer order
- Order Canceled event upon receipt of notice by the customer



Note that for illustration purposes, actions taken by the Broker between the receipt of the original order and the customer cancellation are not included.

#	Step	Reported Event	Comments
1	Customer sends a Buy order to Broker 1	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a* ***New Order event*** type: MENO eventTimestamp: 20180417T143035.234456 manualFlag: false symbol: XYZ orderID: O23456 deptType: A side: Buy price: 9.99 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: INS001 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Broker 1 receives the customer order and assigns it internal orderID: O23456
3	Customer sends cancel instruction to Broker 1	*NA*	

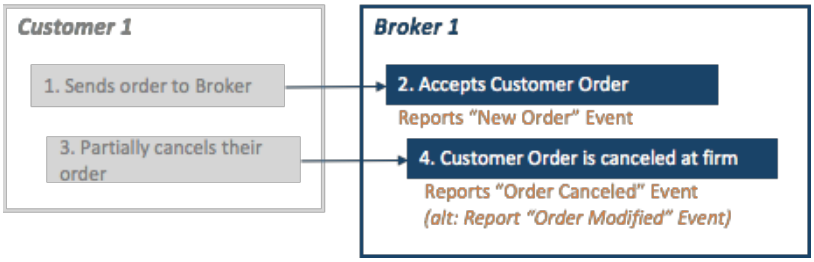
#	Step	Reported Event	Comments
4	The customer order is canceled at Broker 1	*Broker 1 reports an **Order Canceled event*** type: MEOC eventTimestamp: 20180417T143035.323556 manualFlag: false symbol: XYZ orderID: O23456 cancelQty: 1000 leavesQty: 0 initiator: Customer	

2.5.2. Partial Cancellation of an Order

The following scenario illustrates the reporting requirements to CAT if the customer partially cancels an order placed with an Industry Member.

In this scenario, Industry Member Broker 1 must report:

- The receipt of the customer order as a New Order event
- Either a Order Canceled event or an Order Modified event for the partial cancellation

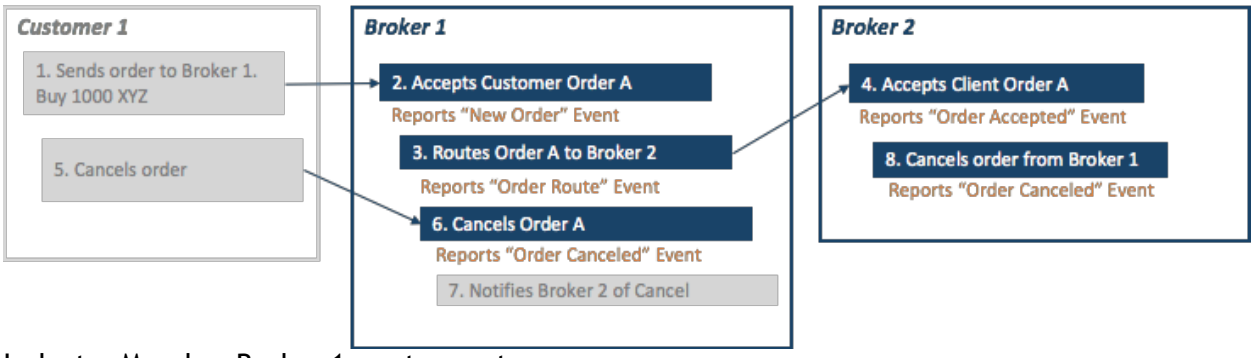


#	Step	Reported Event	Comments
1	Customer sends order to Broker 1	*NA*	

#	Step	Reported Event	Comments
2	Broker 1 accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T153035.234456 manualFlag: false symbol: XYZ orderID: O45678 deptType: A side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: CUS004 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Customer partially cancels initial order (1000 shares --> 600)	*NA*	
4	The customer order is partially canceled at the brokerage firm	*Broker 1 reports a **Order Canceled event*** type: MEOC eventTimestamp: 20180417T153036:123456 manualFlag: false symbol: XYZ orderID: O45678 cancelQty: 400 leavesQty: 600 initiator: Customer	

2.5.3. Cancellation of a Routed Order

This scenario illustrates the CAT reporting requirements for an Industry Member when an order that was previously routed to another Industry Member is canceled.



Industry Member Broker 1 must report:

- The receipt of the customer's order as a New Order event
- The initial route of the order to Broker 2 (an Order Route event)
- The cancellation of the order (an Order Canceled event)

Industry Member Broker 2 must report:

- The receipt of the route from Broker 1 as an Order Accepted event
- The cancellation of the order as an Order Canceled event

#	Step	Reported Event	Comments
1	Customer sends order to Broker 1. Buy 1000 XYZ.	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T153035.234456 manualFlag: false symbol: XYZ orderID: O56575 deptType: A side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REF custDspIntrFlag: false firmDesignatedID: CUS1234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	

#	Step	Reported Event	Comments
3	Broker 1 routes order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T150335.244456 manualFlag: false symbol: XYZ senderIMID: FRMA destination: FRMB destinationType: F orderID: O56575 routedOrderID: RO56575XYZ side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The following data elements are used to link to Broker 2 Order Accepted event. The values must match the corresponding fields as shown in step #4 below. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: FRMA • destination: FRMB • routedOrderID: RO56575XYZ Since Broker 1 is routing to another Industry Member, *session* must not be populated.
4	Broker 2 accepts order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T150335.344456 manualFlag: false symbol: XYZ orderID: OB12345 receiverIMID: FRMB routingOrigin: FRMA routingOriginType: F routedOrderID: RO56575XYZ affiliateFlag: false deptType: T side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	The following data elements are used to link to Broker 1 Order Route event. The values must match the corresponding fields as shown in step #3 above. • Date (from eventTimestamp):20180417 • symbol: XYZ • receiverIMID: FRMB • routingOrigin: FRMA • routedOrderID: RO56575XYZ Since Broker 2 received the order from another Industry Member, *session* must not be populated.
5	Customer cancels order	*NA*	

#	Step	Reported Event	Comments
6	The customer order is canceled at the brokerage firm	*Broker 1 reports a **Order Canceled event*** type: MEOC eventTimestamp: 20180417T150336.123456 manualFlag: false symbol: XYZ orderID: O56575 cancelQty: 1000 leavesQty: 0 initiator: Customer	
7	Broker 1 notifies Broker 2 the order was canceled	*NA*	
8	Broker 2 cancels the order from Broker 1	*Broker 2 reports an **Order Canceled event*** type: MEOC eventTimestamp: 20180417T150336.423456 manualFlag: false symbol: XYZ orderID: OB12345 cancelQty: 1000 leavesQty: 0 initiator: Customer	

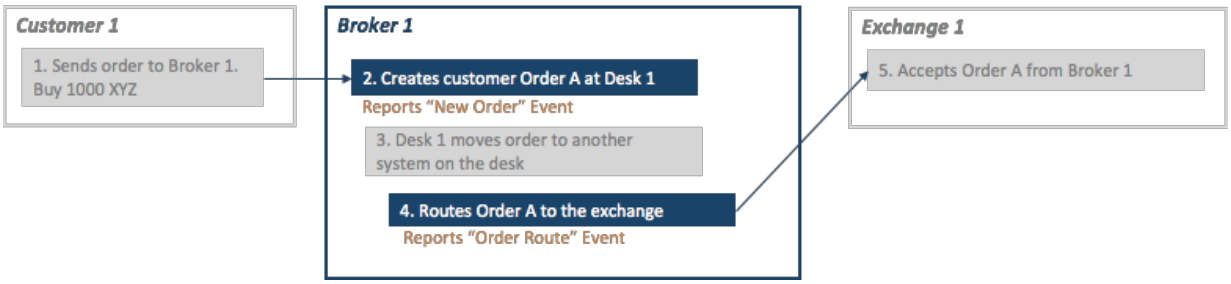
2.6. Additional Reporting Scenarios

2.6.1. Industry Member Utilizes Multiple Systems at One Desk

In the following scenario, the Industry Member has multiple trading systems utilized at a single desk. For CAT reporting, the Industry Member is not required to report information regarding an order's movement between two systems within the same desk or department as an internal route.

In this scenario, the desk which received the customer's order transfers the order into another internal application in order to route the order to an exchange. Since the desk handling the order does not change, the Industry Member Broker 1 is required to report:

- New Order event for the receipt of the customer order
- Order Route event for route to the exchange



#	Step	Reported Event	Comments
1	Customer sends order to Broker 1	*NA*	
2	Broker 1 accepts order from the customer at Desk 1	*Broker 1 reports a* ***New Order event*** type: MENO eventTimestamp: 20180417T153035.234456 manualFlag: false symbol: XYZ orderID: O23456 deptType: A side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDsplntrFlag: false firmDesignatedID: CUST876 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Desk 1 transmits the order to a different internal system	*NA*	

#	Step	Reported Event	Comments
4	Broker 1 (still at Desk 1) routes the order to the exchange	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T153035.334456 manualFlag: false symbol: XYZ senderIMID: FRMA destination: EXCH1 destinationType: E orderID: O23456 routedOrderID: RT23456 session: s2 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	
5	Exchange 1 accepts order from Broker 1	*NA*	

2.6.2. Industry Member Creates Child Orders and Routes

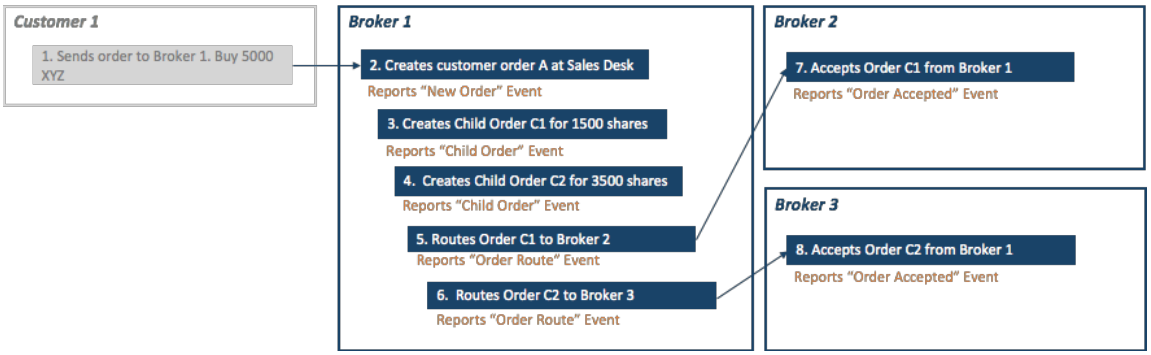
This scenario illustrates the reporting requirements should an Industry Member chose to slice an order into multiple child orders before further handling.

For this scenario, Industry Member Broker 1 is required to report:

- Receipt of the customer order as New Order Event
- A Child Order event for each slice of the order created
- An Order Route event for each child order

Receipt Industry Members Broker 2 and 3 are required to report:

- Order Accepted events for receipts of the order from Broker 1 (and any subsequent order handling)



#	Step	Reported Event	Comments
1	Customer sends order to Broker 1	*NA*	
2	Broker 1 accepts Order A	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180424T113018.123456 manualFlag: false symbol: XYZ orderID: O11235 deptType: A side: Buy price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: ID09876 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 creates 2 child orders from Order A. Order 1 of 2, C12345 for 1500.	*Broker 1 reports a **Child Order event*** type: MECO eventTimestamp: 20180424T113018.323456 symbol: XYZ parentOrderID: O11235 orderID: C12345 side: Buy price: 10.00 quantity: 1500 orderType: LMT timeInForce: DAY tradingSession: REG	

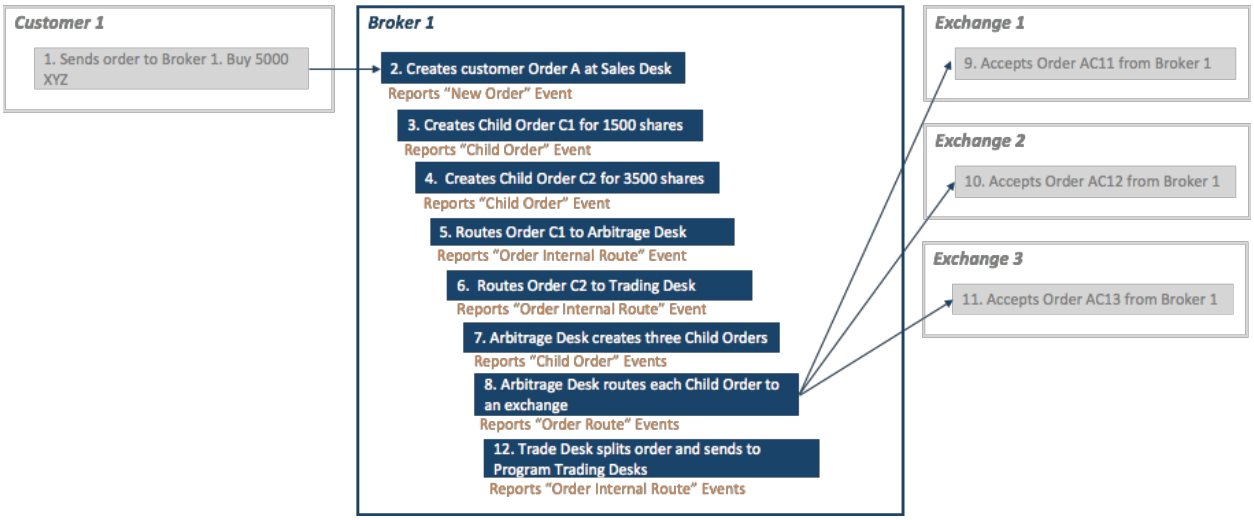
#	Step	Reported Event	Comments
4	Order 2 of 2, C22345 for 3500	*Broker 1 reports a **Child Order event*** type: MECO eventTimestamp: 20180424T113018.323457 symbol: XYZ parentOrderID: O11235 orderID: C22345 side: Buy price: 10.00 quantity: 3500 orderType: LMT timeInForce: DAY tradingSession: REG	
5	Broker 1 routes Child Order C12345 to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180424T113018.343456 manualFlag: false symbol: XYZ senderIMID: BRKR1 destination: FRM2 destinationType: F orderID: C12345 routedOrderID: RTC1 side: Buy price: 10.00 quantity: 1500 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The following data elements are used to link to Broker 2 Order Accepted event. The values must match the corresponding fields as shown in step #7 below. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: FRMA • destination: FRM2 • routedOrderID: RTC1 Since Broker 1 is routing to another Industry Member, *session* must not be populated.

#	Step	Reported Event	Comments
6	Broker 2 routes Child Order C22345 to Broker 3	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180424T113018.343457 manualFlag: false symbol: XYZ senderIMID: BRKR1 destination: FRM3 destinationType: F orderID: C22345 routedOrderID: RTC2 side: Buy price: 10.00 quantity: 3500 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The following data elements are used to link to Broker 3 Order Accepted event. The values must match the corresponding fields as shown in step #8 below. • Date (from eventTimestamp):20180417 • symbol: XYZ • senderIMID: BRKR1 • destination: FRM3 • routedOrderID: RTC2 Since Broker 1 is routing to another Industry Member, *session* must not be populated.
7	Broker 2 accepts order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180424T113018.543456 manualFlag: false symbol: XYZ orderID: O28765 receiverIMID: FRM2 routingOrigin: BRKR1 routingOriginType: F routedOrderID: RTC1 affiliateFlag: false deptType: T side: Buy price: 10.00 quantity: 1500 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	The following data elements are used to link to Broker 1 Order Route event. The values must match the corresponding fields as shown in step #5 above. • Date (from eventTimestamp):20180417 • symbol: XYZ • receiverIMID: FRM2 • routingOrigin: BRKR1 • routedOrderID: RTC1 Since Broker 2 received the order from another Industry Member, *session* must not be populated.

#	Step	Reported Event	Comments
8	Broker 3 accepts order from Broker 1	*Broker 3 reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180424T113018.543458 manualFlag: false symbol: XYZ orderID: O3A1B2C receiverIMID: FRM3 routingOrigin: BRKR1 routingOriginType: F routedOrderID: RTC2 affiliateFlag: false deptType: T side: Buy price: 10.00 quantity: 3500 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	The following data elements are used to link to Broker 1 Order Route event. The values must match the corresponding fields as shown in step #6 above. • Date (from eventTimestamp):20180417 • symbol: XYZ • receiverIMID: FRM3 • routingOrigin: BRKR1 • routedOrderID: RTC2 Since Broker 3 received the order from another Industry Member, *session* must not be populated.

2.6.3. Industry Member Creates Multiple Branches of Child Orders

This scenario illustrates the reporting requirements for an Industry Member where each internal desk has chosen to work an order by splitting the original order into smaller components. The Industry Member has the flexibility to report different events for each desk, should it better reflect the firm's internal systems.



For this scenario, Industry Member Broker 1 must report:
- The receipt of the customer order at the Sales Desk as a New Order event
- A Child Order event for each slice created at the Sales Desk prior to routing to another desk
- An Order Internal Route event for each child order

- For the Child Order sent to the Arbitrage Desk, a Child Order event for each new slice created
- An Order Route event for each Child Order routed from the Arbitrage Desk
- For the Child Order sent to the Trading Desk, an Order Internal Route event for each slice of the order (and any subsequent events not shown)

#	Step	Reported Event	Comments
1	Customer sends order to Broker 1	*NA*	
2	Broker 1 accepts Order A	*Broker 1 reports a* ***New Order event*** type: MENO eventTimestamp: 20180424T113018.123456 manualFlag: false symbol: XYZ orderID: O11235 deptType: A side: Buy price: 10.00 quantity: 5000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: ID09876 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	

#	Step	Reported Event	Comments
3, 4	Broker 1 creates 2 child orders from Order A	*Broker 1 reports a **Child Order event (1 of 2)*** type: MECO eventTimestamp: 20180424T113018.323456 symbol: XYZ parentOrderID: O11235 orderID: C12345 side: Buy price: 10.00 quantity: 1500 orderType: LMT timeInForce: DAY tradingSession: REG *Broker 1 reports a **Child Order event (2 of 2)*** type: MECO eventTimestamp: 20180424T113018.323457 symbol: XYZ parentOrderID: O11235 orderID: C22345 side: Buy price: 10.00 quantity: 3500 orderType: LMT timeInForce: DAY tradingSession: REG	The Sales Desk reports a Child Order event because the parent Order A, *orderID* = O11235, is split and assigned new order IDs at the Sales Desk before further handling. Order 1 of 2, C12345 for 1500 Order 2 of 2, C22345 for 3500
5	Child Order 1 is internally routed to the Arbitrage Desk	*Broker 1 reports an **Order Internal Route event*** type: MEIR eventTimestamp: 20180424T113018.323656 manualFlag: false orderID: C12345 deptType: T receivingDeskType: AR side: Buy price: 10.00 quantity: 1500 orderType: LMT	*orderID* = C12345 is used for subsequent order events

#	Step	Reported Event	Comments
6	Child Order 2 is internally routed to the Trading Desk	*Broker 1 reports an* ***Order Internal Route event*** type: MEIR eventTimestamp: 20180424T113018.323657 manualFlag: false orderID: C22345 deptType: T receivingDeskType: T side: Buy price: 10.00 quantity: 3500 orderType: LMT	*orderID* = C22345 is used for subsequent order events

#	Step	Reported Event	Comments
7	The Arbitrage Desk splits the order and creates three (3) child orders	*Broker 1 reports a **Child Order event (1 of 3)*** type: MECO eventTimestamp: 20180424T113018.324656 symbol: XYZ parentOrderID: C12345 orderID: AC112345 side: Buy price: 10.00 quantity: 400 orderType: LMT timeInForce: DAY tradingSession: REG *Broker 1 reports a **Child Order event (2 of 3)*** type: MECO eventTimestamp: 20180424T113018.324657 symbol: XYZ parentOrderID: C12345 orderID: AC122345 side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG *Broker 1 reports a **Child Order event (3 of 3)*** type: MECO eventTimestamp: 20180424T113018.324658 symbol: XYZ parentOrderID: C12345 orderID: AC132345 side: Buy price: 10.00 quantity: 600 orderType: LMT timeInForce: DAY tradingSession: REG	The Arbitrage Desk reports a Child Order event for each order slice. Note, the *parentOrderID* is the last used *orderID*, C12345. Order 1 of 3, AC112345 for 400 Order 2 of 3, AC122345 for 500 Order 3 of 3, AC132345 for 600

#	Step	Reported Event	Comments
8	The Arbitrage Desk routes each child order to an exchange	*Broker 1 reports an* ***Order Route event (1 of 3)*** type: MEOR eventTimestamp: 20180424T113018.325656 manualFlag: false symbol: XYZ senderIMID: BRKR1 destination: EXCH1 destinationType: E orderID: AC112345 routedOrderID: RTAC11 session: s5 side: Buy price: 10.00 quantity: 400 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA *Broker 1 reports an* ***Order Route event (2 of 3)*** type: MEOR eventTimestamp: 20180424T113018.325657 manualFlag: false symbol: XYZ senderIMID: BRKR1 destination: EXCH2 destinationType: E orderID: AC122345 routedOrderID: RTAC12 session: s6 side: Buy price: 10.00 quantity: 500 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	The *orderID* on each route is equal to the *orderID* assigned by the Child Order event

#	Step	Reported Event	Comments
8	(cont'd from above)	*Broker 1 reports an* ***Order Route event (3 of 3)*** type: MEOR eventTimestamp: 20180424T113018.325658 manualFlag: false symbol: XYZ senderIMID: BRKR1 destination: EXCH3 destinationType: E orderID: AC132345 routedOrderID: RTAC13 session: s7 side: Buy price: 10.00 quantity: 600 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	
9	Exchange 1 accepts order from Broker 1	*EXCH1 reports a Participant* ***Order Accepted event***	
10	Exchange 2 accepts order from Broker 1	*EXCH2 reports a Participant* ***Order Accepted event***	
11	Exchange 3 accepts order from Broker 1	*EXCH3 reports a Participant* ***Order Accepted event***	

#	Step	Reported Event	Comments
12	The Trading Desk splits the order and sends to two different Program Trading Desks	*Broker 1 reports an* ***Order Internal Route event (1 or 2)*** type: MEIR eventTimestamp: 20180424T113018.343657 manualFlag: false orderID: C22345 deptType: T receivingDeskType: PT side: Buy price: 10.00 quantity: 2000 orderType: LMT *Broker 1 reports an* ***Order Internal Route event (2 or 2)*** type: MEIR eventTimestamp: 20180424T113018.343658 manualFlag: false orderID: C22345 deptType: T receivingDeskType: PT side: Buy price: 10.00 quantity: 1500 orderType: LMT	The Trading Desk keeps the *orderID* = C22345 for further order handling, therefore, can report the split using an Order Internal Route with the new quantity.

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

This scenario illustrates the reporting requirements for an Industry Member when an order is received and then manually internally routed to another department where it is immediately entered into an electronic order management system upon receipt (e.g. the branch receives an order and calls the Trading Desk).

For this scenario, Industry Member Broker 1 must report:

- The receipt of the order from the customer (a New Order event with *manualFlag* = true)
- An Order Internal Route event for route of the order to the trading desk which will enter the trade into the Industry Member's electronic system
- The route of the order to the exchange (Order Route event)

#	Step	Reported Event	Comments
1	Customer calls in order to Broker 1	*NA*	
2	The branch manually creates an order ticket for the customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T153015.00 manualFlag = true symbol: XYZ orderID: O24680 deptType: O side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDsplntrFlag: false firmDesignatedID: FDID00234 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	Note that for the manual ticket: • eventTimestamp - may be reported in seconds for manual orders • manualFlag = true
3	The branch calls the order into the Trading Desk, which enters the order into the firm's electronic system immediately upon receipt	*Broker 1 reports an **Order Internal Route event*** type: MEIR eventTimestamp: 20180417T153016.112345 manualFlag: true symbol: XYZ orderID: O24680 deptType: T receivingDeskType: T side: Buy price: 10.00 quantity: 1000 orderType: LMT	Note that for the Internal Route, the order was manually received but electronically captured immediately upon receipt and therefore does not require a separate *electronicTimestamp*

#	Step	Reported Event	Comments
4	The order is externally routed to EXCH1	*Broker 1 reports an* ***Order Route event*** type: MEOR eventTimestamp: 20180417T153016.112545 manualFlag: false symbol: XYZ senderIMID: BRKR1 destination: EXCH1 destinationType: E orderID: O24680 routedOrderID: RTO24680 session: s18 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	
5	EXCH1 accepts order from Broker 1	*EXCH1 reports a Participant* ***Order Accepted event***	

2.6.5. Order Routed and Executed via a Clearing Firm

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

For this scenario, the introducing firm (Broker 1) must report:

- The receipt of the order from the customer in a New Order event
- The route of the order to the clearing firm in an Order Route event

The clearing firm would report the following:

- The receipt of the order by the clearing firm in an Order Accepted event
- The execution of the order in a Trade event

Only the executing entity is required to report executions to CAT. In this scenario only the clearing firm is responsible to report a Trade event.

#	Step	Reported Event	Comments
1	Customer sends order to Broker 1	*NA*	
2	Broker 1 accepts order from the customer	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T153035.234456 manualFlag: false symbol: XYZ orderID: O23456 deptType: A side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY 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 eventTimestamp: 20180417T153035.334456 manualFlag: false symbol: XYZ senderIMID: FRMA destination: FRMB destinationType: F orderID: O23456 routedOrderID: RT23456 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	

#	Step	Reported Event	Comments
4	The clearing firm (FRMB) accepts the order routed from Broker 1	*Clearing firm reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T153036.334456 manualFlag: false symbol: XYZ orderID: O3A1B2C receiverIMID: FRMB routingOrigin: FRMA routingOriginType: F routedOrderID: RT23456 affiliateFlag: false deptType: T side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Clearing firm executes the orders	*Clearing firm reports a **Trade event*** Type: MEOT eventTimestamp: 20180417T153037.534456 manualFlag: false Symbol: XYZ tradeID: TO3A1B2C Quantity: 1000 Price: 10.00 marketCenterID: DN negotiatedTradeSide: NA buyDetails: orderID: O3A1B2C sideIMID: FRMA Side: Buy leavesQty: 0 capacity: Principal tapeTradeD: TRFAO556 sellDetails: sideIMID: FRMB Side: Sell capacity:Principal firmDesignatedID: PROPF accountHolderType: O	

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

This scenario illustrates the 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.

The introducing firm, Industry Member Broker 1, must report the following to CAT:

- The receipt of the order from the customer in a New Order event
- The route of the order to the Exchange 1 in an Order Route event

The clearing firm does not have CAT reporting obligations.

The exchange follows Participant reporting requirements for subsequent handling.

#	Step	Reported Event	Comments
1	Customer sends order to Broker 1	*NA*	
2	Broker 1 accepts order from the customer	*Broker 1 reports a* ***New Order event*** type: MENO eventTimestamp: 20180417T153035.234456 manualFlag: false symbol: XYZ orderID: O23456 deptType: A side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDsplIntrFlag: false firmDesignatedID: 4e3f2g1h accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	

#	Step	Reported Event	Comments
3	Through clearing firm's system, Broker 1 enters and directs the order route to Exchange 1	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T153036.234456 manualFlag: false symbol: XYZ senderIMID: FRMA destination: EXCH1 destinationType: E orderID: O23456 routedOrderID: RT23456 session: s2 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	
4	Exchange 1 accepts order from Broker 1	*Exchange 1 reports a Participant **Order Accepted event***	

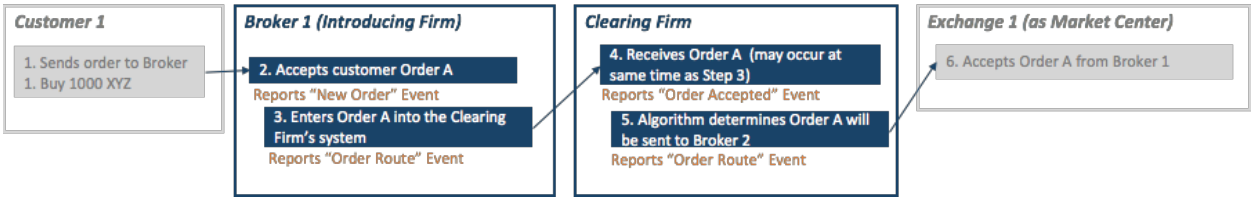
2.6.7. Order Routing via an Algorithm Provided by the Clearing Firm

This scenario illustrates the reporting requirements to CAT when an introducing firm receives a customer order and enters it into its 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. In this case, the following CAT events must be reported:

The introducing firm, Broker 1, must report:
- The receipt of the customer order in a New Order event
- The route of the order to the clearing firm in an Order Route event

The clearing firm must report:
- The receipt fo the order from the introducing firm in an Order Accepted event
- The route of the order to the routing destination as an Order Route event

The routing destination (exchange) must report:
- The receipt of order routed from the clearing firm
- The subsequent order handling actives that are CAT reportable



#	Step	Reported Event	Comments
1	Customer sends order to Broker 1	*NA*	
2	Broker 1, as the introducing firm, accepts order from the customer	*Broker 1 (IMID = FRMA) reports a **New Order event*** type: MENO eventTimestamp: 20180417T153035.234456 manualFlag: false symbol: XYZ orderID: O23456 deptType: A side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDsplIntrFlag: false firmDesignatedID: FDID2222 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 enters the order into the clearing firm's system (Clearing Firm's IMID is FRMB)	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T153035.334456 manualFlag: false symbol: XYZ senderIMID: FRMA destination: FRMB destinationType: F orderID: O23456 routedOrderID: RT23456 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG	

#	Step	Reported Event	Comments
		isoInd: NA	
4	The clearing firm (FRMB) accepts the order routed from Broker 1	*Clearing firm (FRMB) reports an* ***Order Accepted event*** type: MEOA eventTimestamp: 20180417T153036.334456 manualFlag: false symbol: XYZ orderID: O3A1B2C receiverIMID: FRMB routingOrigin: FRMA routingOriginType: F routedOrderID: RT23456 affiliateFlag: false deptType: T side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	

#	Step	Reported Event	Comments
5	The clearing firm's system algorithm determines to route the order out to Exchange 1 (EXCH1)	*Clearing firm (FRMB) reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T153038.334456 manualFlag: false symbol: XYZ senderIMID: FRMB destination: EXCH1 destinationType: E orderID: O3A1B2C routedOrderID: BEO34567 session: EA:16 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	
6	Exchange 1 receives the order from clearing firm	*Exchange 1 (EXCH1) reports the Participant **Order Accepted event*** *Exchange would also report any subsequent order handling that are CAT reportable*	

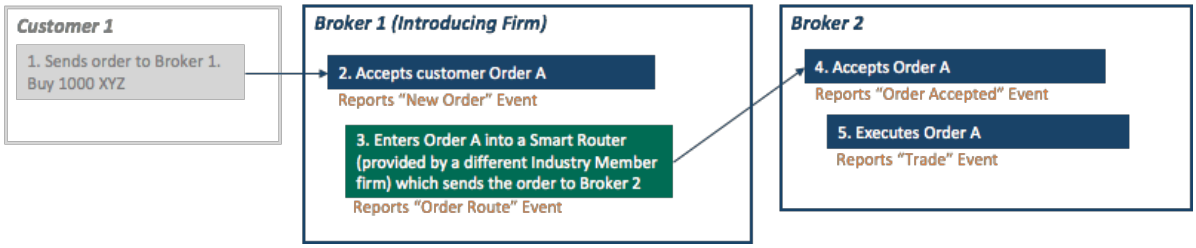
2.6.8. Order Routing via Smart Router Provided by another Industry Member

In this scenario, the introducing firm receives a customer order and enters it directly to a Smart Router provided by another Industry Member to route the order. The Smart Router provided by another industry member does not need to separately report to CAT when all the following conditions apply:

1. The Industry Member providing the order routing system has no discretion over the order once it is entered into the Industry Member's order-routing system. The order routing destination ("Destination Market Center") must either be directed by the originating Industry Member or be subject to the pre-determined algorithm of the routing system agreed to by the originating Industry Member. The Industry Member providing the order routing system would have no involvement relating to the routing of the order, other than providing the routing mechanism.
2. The originating Industry Member must have established a relationship with the Destination Market Center, including meeting any and all applicable requirements to route orders to that destination. The originating Industry Member understands that the Industry Member providing the order routing system has no involvement with respect to the order in any way, except for providing a routing mechanism. No pre-established relationship between the Industry Member providing the order routing system and the Destination Market Center would be necessary for the originating Industry Member to access the routing destination.

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

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



The introducing firm, Industry Member Broker 1, is required to report:
- The receipt of the customer order in a New Order event
- The route of the order through a smart router (Order Route event with *handlingInstructions* = SMT)

The destination, Industry Member Broker 2, is required to report:
- The receipt of the order from Broker 1 as an Order Accepted event
- Execution of the order (Trade event)

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

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

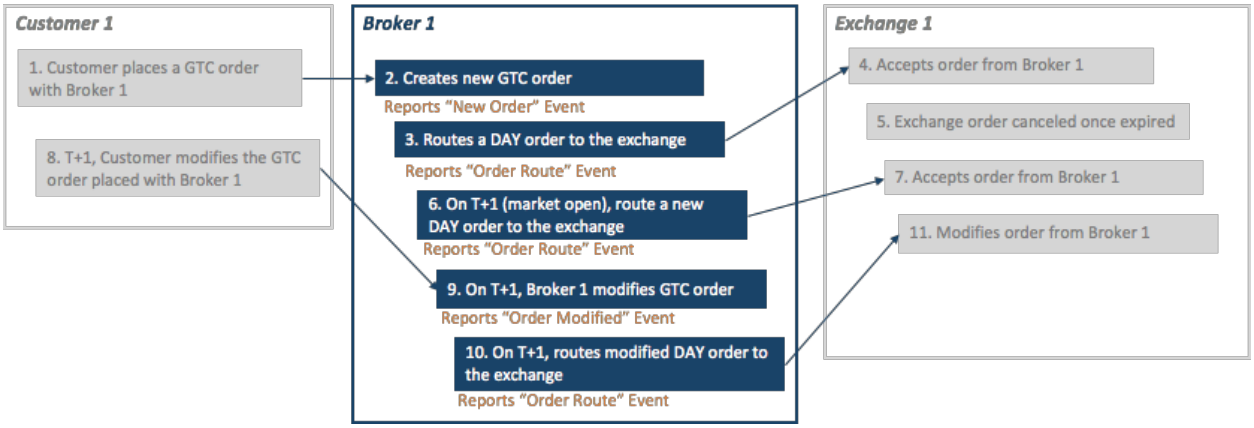
#	Step	Reported Event	Comments
2	Broker 1 (as introducing firm) accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T151018.123456 manualFlag: false symbol: XYZ orderID: O34567 deptType: A side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: FDID358 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
3	Broker 1 enters order into smart router	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T151018.125456 manualFlag: false symbol: XYZ senderIMID: BRKR1 destination: BRKR2 destinationType: F orderID: O34567 routedOrderID: SR1112 side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA handlingInstructions: SMT	Must included handling instruction 'SMT'

#	Step	Reported Event	Comments
4	Broker 2 accepts order from Broker 1 (via smart router)	*Broker 2 reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T151018.155456 manualFlag: false symbol: XYZ orderID: B26789 receiverIMID: BRKR2 routingOrigin: BRKR1 routingOriginType: F routedOrderID: SR1112 affiliateFlag: false deptType: T side: Buy price: 10.00 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	
5	Broker 2 matches with orderID B2O1234 and executes	*Broker 2 reports a **Trade event*** type: MEOT eventTimestamp: 20180417T151018.255456 manualFlag: false symbol: XYZ tradeID: TB21567 quantity: 1000 price: 10.00 negotiatedTradeSide: NA buyDetails: orderID: B26789 sideIMID: BRKR1 side: Buy leavesQty: 0 capacity: Agency tapeTradeID: TRFB12321 sellDetails: orderID: B2O1234 sideIMID: BRKRX side: Sell leavesQty: 500 capacity: Agency tapeTradeID: TRF3456734	

2.6.9. GTC Order Routed to Exchange, Modified by Customer

The following scenario illustrates the reporting requirements for handling order types that can live across days (e.g. GTC, GTD). Industry Member Broker 1 receives a "GTC" order from a customer. From Broker 1's perspective, the order is reported as GTC as maintained on their book. When Broker 1 routes the order to the exchange for execution, the order is a "DAY" order from the exchange's perspective and should be reported as *timeInForce = DAY* on the Order Route event as well as relevant Participant events. The Industry Member must submit an Order Route event every day the order is sent to the exchange until the order is executed or canceled.

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.



For this scenario, Industry Member Broker 1 is responsible for reporting:

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

#	Step	Reported Event	Comments
1	Customer sends new GTC order to Broker 1	*NA*	

#	Step	Reported Event	Comments
2	Broker 1 accepts customer order	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T153035.123456 manualFlag: false symbol: XYZ orderID: O76543 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 order to Exchange 1	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180417T153035.124456 manualFlag: false symbol: XYZ senderIMID: BROKER1 destination: EXCH1 destinationType: E orderID: O76543 routedOrderID: RT91234 session: s1t2 side: Buy price: 9.50 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	
4	Exchange 1 accepts order from Broker 1	*Exchange 1 reports a Participant **Order Accepted event***	
5	Close on business on T, order on the exchange expires		

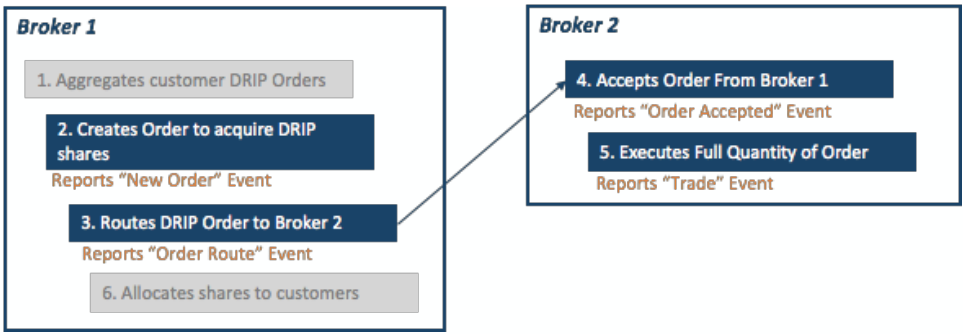
#	Step	Reported Event	Comments
6	Start of day T+1, Broker 1 routes order to Exchange 1	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180418T093000.000000 manualFlag: false symbol: XYZ senderIMID: BROKER1 destination: EXCH1 destinationType: E orderID: O76543 priorOrderDate: 20180417 routedOrderID: RT91235 session: s1t2 side: Buy price: 9.50 quantity: 1000 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA	Order Route event must include priorOrderDate
7	Exchange 1 accepts order from Broker 1	*Exchange 1 reports a Participant **Order Accepted event***	
8	T+1, Customer modifies the GTC order, reducing share quantity	*NA*	
9	The customer GTC order is updated at the brokerage firm per the customer's instructions	*Broker 1 reports an **Order Modified event*** type: MEOM eventTimestamp: 20180418T103045.123456 manualFlag: false symbol: XYZ orderID: OM87654 priorOrderID: O76543 priorOrderDate: 20180417 initiator: Customer side: Buy price: 9.50 quantity: 900 leavesQty: 900 orderType: LMT timeInForce: GTC tradingSession: REG custDsplIntrFlag: false	

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

2.6.10. Dividend Reinvestment

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

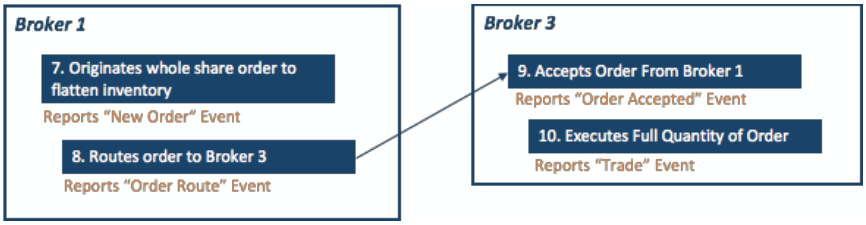
It is not required for Broker 1 to report Post Trade Allocation events for allocations to sub-accounts for dividend repurchase orders until Phase 2c.



For this scenario, Industry Member Broker 1 is responsible for reporting:
- A New Order event for a single order to acquire shares for all customers participating in the dividend reinvestment program
- An Order Route event for routing the principal purchase to Broker 2

Industry Member Broker 2 is responsible for reporting:
- An Order Accepted event to confirm receipt of the order from Broker 1
- A Trade event confirming execution of the order

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 responsible for reporting:
- A New Order event for the whole share order
- An Order Route event for routing the sale order to Broker 3

Industry Member Broker 3 is responsible for reporting:
- An Order Accepted event for the receipt of the order from Broker 1
- A Trade event for the execution of the order

#	Step	Reported Event	Comments
1	Broker 1 aggregates orders for DRIP participant customers into a single order	*NA*	

#	Step	Reported Event	Comments
2	Broker 1 originates order rounded up to the nearest whole share	*Broker 1 reports a **New Order event*** type: MENO eventTimstamp: 20180424T113018.543458 manualFlag: false symbol: XYZ orderID: O11235 deptType: A side: Buy price: 10.00 quantity: 113 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: DIV custDspIntrFlag: false firmDesignatedID: ID09876 accountHolderType: C affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	The broker uses *handlingInstructions* = DIV to indicate the order if part of a Dividend Reinvestment acquisition
3	Broker 1 routes order to Broker 2	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180424T113018.545458 manualFlag: false symbol: XYZ senderIMID: FRMA destination: FRMB destinationType: F orderID: O11235 routedOrderID: OBB12345 side: Buy price: 10.00 quantity: 113 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: N handlingInstructions: RAR	The following data elements are used to link to Broker 2 Order Accepted event. The values must match the corresponding fields as shown in step #4 below. •Date (from eventTimestamp): 20180424 •symbol: XYZ •senderIMID: FRMA •destination: FRMB •routedOrderID: OBB12345 Since Broker 1 is routing to another Industry Member, *session* must not be populated.

#	Step	Reported Event	Comments
4	Broker 2 accepts the order from Broker 1	*Broker 2 reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180424T113018.943458 manualFlag: false symbol: XYZ orderID: O28765 receiverIMID: FRMB routingOrigin: FRMA routingOriginType: F routedOrderID: OBB12345 affiliateFlag: false deptType: T side: Buy price: 10.00 quantity: 113 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	The following data elements are used to link to Broker 1 Order Route event. The values must match the corresponding fields as shown in step #3 above. •Date (from eventTimestamp): 20180424 •symbol: XYZ •receiverIMID: FRMB •routingOrigin: FRMA •routedOrderID: OBB12345 Since Broker 2 received the order from another Industry Member, *session* must not be populated.
5	Broker 2 executes the full quantity of order (matches with existing order BO445 from FRMJ)	*Broker 2 reports a **Trade event*** type: MEOT eventTimestamp: 20180424T113019.123456 manualFlag: false symbol: XYZ tradeID: BBB12345 quantity: 113 price: 10.00 marketCenterID: DN negotiatedTradeSide: NA buyDetails: orderID: O28765 sideIMID: FRMA side: Buy leavesQty: 0 capacity: Agency tapeTradeID: BAA89898 sellDetails: orderID: BO445 sideIMID: FRMJ side: Sell leavesQty: 100 capacity: Agency tapeTradeID: BBG12312	
6	Broker 1 allocates shares to customers	*NA*	

#	Step	Reported Event	Comments
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 eventTimstamp: 20180427T113015.123456 manualFlag: false symbol: XYZ orderID: OD56391 deptType: T side: Sell price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY tradingSession: REG custDspIntrFlag: false firmDesignatedID: DIVACC05 accountHolderType: P affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
8	Broker 1 routes order to Broker 3	*Broker 1 reports an **Order Route event*** type: MEOR eventTimestamp: 20180427T113015.125456 manualFlag: false symbol: XYZ senderIMID: FRMA destination: BROKER3 destinationType: F orderID: OD56391 routedOrderID: O23C565 side: Sell price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: N	The following data elements are used to link to Broker 3 Order Accepted event. The values must match the corresponding fields as shown in step #9 below. •Date (from eventTimestamp): 20180427 •symbol: XYZ •senderIMID: FRMA •destination: BROKER3 •routedOrderID: O23C565 Since Broker 1 is routing to another Industry Member, *session* must not be populated.

#	Step	Reported Event	Comments
9	Broker 3 accepts the order from Broker 1	*Broker 3 reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180427T113015.135456 manualFlag: false symbol: XYZ orderID: O31234 receiverIMID: BROKER3 routingOrigin: FRMA routingOriginType: F routedOrderID: O23C565 affiliateFlag: false deptType: T side: Sell price: 10.00 quantity: 1 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA custDspIntrFlag: false	The following data elements are used to link to Broker 1 Order Route event. The values must match the corresponding fields as shown in step #8 above. •Date (from eventTimestamp): 20180427 •symbol: XYZ •receiverIMID: BROKER3 •routingOrigin: FRMA •routedOrderID: O23C565 Since Broker 2 received the order from another Industry Member, *session* must not be populated.
10	Broker 3 executes the full quantity of order (matches with existing order O45329 from BRKR4)	*Broker 2 reports a **Trade event*** type: MEOT eventTimestamp: 20180427T113015.235456 manualFlag: false symbol: XYZ tradeID: T1A0008 quantity: 1 price: 10.00 marketCenterID: DN negotiatedTradeSide: NA buyDetails: orderID: O45329 sideIMID: BRKR4 side: Buy leavesQty: 99 capacity: Agency tapeTradeID: ABC171722 sellDetails: orderID: O31234 sideIMID: BROKER3 side: Sell leavesQty: 0 capacity: Agency tapeTradeID: DLM4890002	

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

This scenario illustrates the reporting requirements when an Industry Member splits the equity leg of complex options from customers. Upon determining the price at which the equity legs must be executed, the Industry Member routes the equity legs to another Industry Member for execution.

Note that the reporting requirement descriptions and flow chart below only show the equity leg handlings. It does not include the complex option orders or option legs.

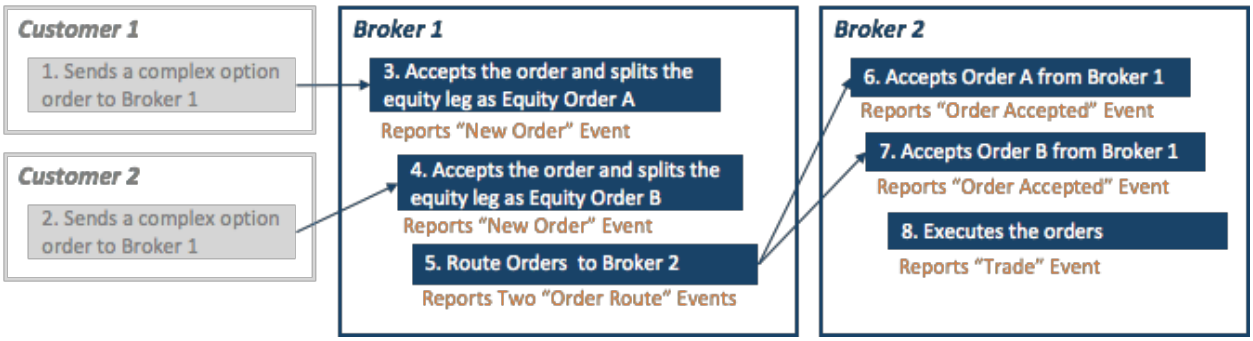
In this scenario, the Industry Member (Broker 1) must report:

- The receipt of an equity order from the customer (New Order events)
- The route of the equity order to Broker 2 (Order Route events)

Industry Member Broker 2 receives the equity leg orders from Broker 1. The orders may come along with an offsetting order to be crossed, or Broker 2 may receive the offsetting order from another Industry Member. Broker 2 then executes as agency cross.

In this scenario, Broker 2 must report the following events to CAT:

- The receipt of the equity leg order (Sell) from Broker 1 in an Order Accepted event
- The receipt of the equity leg order (Buy) from Broker 1 (Or receipt of a Buy order from another Industry Member) in an Order Accepted event
- The execution of the orders in a Trade Event



#	Step	Reported Event	Comments
1	Customer 1 sends a complex option order to Broker 1	*NA*	
2	Customer 2 sends a complex option order to Broker 1	*NA*	

#	Step	Reported Event	Comments
3	Broker 1 accepts customer order and split the equity leg	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T153035.123456 manualFlag: false symbol: XYZ orderID: CO12345 deptType: A side: Buy price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: OPT custDspIntrFlag: false firmDesignatedID: INS345 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	
4	Broker 1 accepts customer order and split the equity leg	*Broker 1 reports a **New Order event*** type: MENO eventTimestamp: 20180417T153035.523456 manualFlag: false symbol: XYZ orderID: CO6789 deptType: A side: Sell price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: OPT custDspIntrFlag: false firmDesignatedID: INS999 accountHolderType: A affiliateFlag: false negotiatedTradeFlag: false representativeInd: N	

#	Step	Reported Event	Comments
5	Broker 1 routes the equity leg orders to Broker 2	*Broker 1 (IMID = BRKA) reports two **Order Route events*** type: MEOR eventTimestamp: 20180417T153035.553456 manualFlag: false symbol: XYZ senderIMID: BRKA destination: BRKB destinationType: F orderID: CO12345 routedOrderID: RTCO12345 side: Buy price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA handlingInstructions: RAR type: MEOR eventTimestamp: 20180417T153035.553456 manualFlag: false symbol: XYZ senderIMID: BRKA destination: BRKB destinationType: F orderID: CO6789 routedOrderID: RTCO6789 side: Sell price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA handlingInstructions: RAR	In the first MEOR event, the following data elements will be used to link the Order Accepted event reported by Broker 2: • date: 20180417 • symbol: XYZ • senderIMID: BRKA • destination: BRKB • routedOrderID: RTCO12345 In the second the MEOR event, the following data elements must match the corresponding fields reported by Broker 2 on the Order Accepted event: • date: 20180417 • symbol: XYZ • senderIMID: BRKA • destination: BRKB • routedOrderID: RTCO6789 Since Broker 1 is routing to another Industry Member, *session* must not be populated.

#	Step	Reported Event	Comments
6	Broker 2 accepts the routed order from Broker 1	*Broker 2 (IMID = BRKB) reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T153035.853456 manualFlag: false symbol: XYZ orderID: RTB910 receiverIMID: BRKB routingOrigin: BRKA routingOriginType: F routedOrderID: RTCO12345 affiiliateFlag: false deptType: T side: Buy price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	The following data elements are used to create linkage keys: • date: 20180417 • symbol: XYZ • receiverIMID: BRKB • routingOrigin: BRKA • routedOrderID: RTCO12345 Since Broker 2 received the order from another Industry Member, *session* must not be populated.
7	Broker 2 accepts the routed order from Broker 1	*Broker 2 (IMID = BRKB) reports an **Order Accepted event*** type: MEOA eventTimestamp: 20180417T153035.853456 manualFlag: false symbol: XYZ orderID: RTB909 receiverIMID: BRKB routingOrigin: BRKA routingOriginType: F routedOrderID: RTCO6789 affiliateFlag: false deptType: T side: Sell price: 10.00 quantity: 200 orderType: LMT timeInForce: DAY tradingSession: REG isoInd: NA handlingInstructions: OPT custDspIntrFlag: false	The following data elements are used to create linkage keys: • date: 20180417 • symbol: XYZ • receiverIMID: BRKB • routingOrigin: BRKA • routedOrderID: RTCO6789 Since Broker 2 received the order from another Industry Member, *session* must not be populated.

#	Step	Reported Event	Comments
8	Broker 2 executes the Buy and Sell orders	*Broker 1 reports a **Trade event*** type: MEOT eventTimestamp: 20180417T153035.883456 manualFlag: false symbol: XYZ tradeID: TXYZ123 quantity: 200 price: 10.00 marketCenterID: DN negotiatedTradeSide: NA buyDetails: orderID: RTB910 sideIMID: FRMA side: Buy leavesQty: 0 capacity: Agency tapeTradeID: TRF123 sellDetails: orderID: RTB909 sideIMID: FRMA side: Sell leavesQty: 0 capacity: Agency tapeTradeID: TRF987	

2.7. JSON and CSV Examples

This provides an illustration of the different reporting formats of JSON and CSV.

2.7.1. JSON Representation

Below is a JSON representation using the example in section 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 customer order	*Broker 1 reports a* ***New Order event***
		
		type: MENO
		eventTimstamp: 20180416T153035.234456
		manualFlag: false
		symbol: XYZ
		orderID: O12345
		deptType: T
		side: Buy
		price: 10.00
		quantity: 500
		orderType: LMT
		timeInForce: DAY
		tradingSession: REG
		custDspIntrFlag: false
		firmDesignatedID: INS001
		accountHolderType: A
		affiliateFlag: false
		negotiatedTradeFlag: false
		representativeInd: N
			{
			"type": "MENO",
			"eventTimstamp": "20180416T153035.234456",
			"manualFlag": false,
			"symbol": "XYZ",
			"orderID": "O12345",
			
			"deptType": "T",
			"side": "Buy",
			"price": 10.00,
			"quantity": 500,
			"orderType": "LMT",
			"timeInForce": "DAY",
			"tradingSession": "REG",
			"custDspIntrFlag": false,
			"firmDesignatedID": "INS001",
			"accountHolderType": "A",
			"affiliateFlag": false,
			"negotiatedTradeFlag": false,
			"representativeInd": "N"
			}

3	Broker 1 creates prop order	*Broker 1 reports a* ***New Order event***
		
		type: MENO
		eventTimestamp: 20180416T153035.253456
		manualFlag: false
		symbol: XYZ
		orderID: P12345
		deptType: T
		Side: Sell
		Price: 10.00
		quantity: 500
		timeInForce: DAY
		tradingSession: REG
		custDspIntrFlag: false
		firmDesignatedID: PROP123
		accountHolderType: P
		affiliateFlag: false
		negotiatedTradeFlag: false
		representativeInd: N
			{
			"type": "MENO",
			"eventTimestamp": "20180416T153035.253456",
			"manualFlag": false,
			"symbol": "XYZ",
			"orderID": "P12345",
			
			"deptType": "T",
			"Side": "Sell",
			"price": 10.00,
			"quantity": 500,
			"timeInForce": "DAY",
			"tradingSession": "REG",
			"custDspIntrFlag": false,
			"firmDesignatedID": "PROP123",
			"accountHolderType": "P",
			"affiliateFlag:" false,
			"negotiatedTradeFlag": false,
			"representativeInd": "N"
			}

#	Step	Reported Event	Comments

4	Broker 1 executes order against own proprietary account	*Broker 1 reports a **Trade event***
		
		 type: MEOT
		 eventTimestamp: 20180416T153035.253456
		 manualFlag: false
		 symbol: XYZ
		 tradeID: TXYZ555
		 quantity: 500
		 price: 10.00
		 marketCenterID: DN
		 negotiatedTradeSide: NA
		 buyDetails:
		 orderID: O12345
		 sideIMID: FRMA
		 side: Buy
		 leavesQty: 0
		 capacity: Agency
		 tapeTradeID: TRF123
		 sellDetails:
		 orderID: P12345
		 sideIMID: FRMA
		 side: Sell
		 leavesQty: 0
		 capacity: Principal
		 tapeTradeID: TRF123
			{
			 "type": "MEOT",
			 "eventTimestamp": "20180416T153035.253456",
			 "manualFlag": false,
			 "symbol": "XYZ",
			 "tradeID": "TXYZ555",
			 "quantity": 500,
			 "price": 10.00,
			 "marketCenterID": "DN",
			 "negotiatedTradeSide": "NA",
			 "buyDetails": {
			 "orderID": "O12345",
			 "sideIMID": "FRMA",
			 "side": "Buy",
			 "leavesQty": 0,
			 "capacity": "Agency",
			 "tapeTradeID": "TRF123"
			 },
			 "sellDetails:": {
			 "orderID": "P12345",
			 "sideIMID": "FRMA",
			 "side": "Sell",
			 "leavesQty": 0,
			 "capacity": "Principal",
			 "tapeTradeID": "TRF123"
			 }
			 }

2.7.2. CSV Representation

Below is the corresponding CSV representation of the same sample events.

Step 2: New Order Event

```
MENO,20180416T153035.234456,E,false,,,XYZ,O12345,N,T,A,,Buy,10.00,,,500,,,LMT,,DAY,REG,,,false,INS001,A,,,N,,false,,,,,,,
```

Step 3: New Order Event

```
MENO,20180416T153035.234457,E,false,,,XYZ,P12345,F,T,PR,,Sell,10.00,,,500,,,LMT,,DAY,REG,,,false,PROP123,P,,,N,,false,,,,,,,
```

Step 4: Trade Event

```
MEOT,20180416T153035.253456,false,,,XYZ,TXYZ555,500,10.00,DN,NA,TERM123,O12345,  FRMA,Buy,0,Agency,TRF123,P12345,FRMA,Sell,0,Principal,TRF123,,,,,,,
```

3. Option Scenarios and Examples

This section illustrates reporting scenarios for single leg electronic option events in scope for Phase 2b. Each example includes a process flow table and sample reporting values.

3.1. Option Order Origination and Route Scenarios

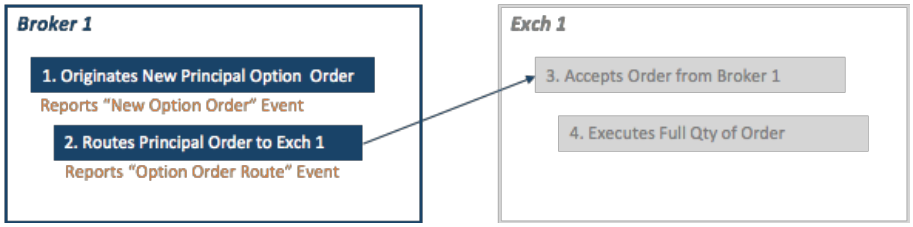
This section lays out the fundamental and common reporting scenarios. In addition to the scenarios provided below, please also refer to Equity Event Scenarios 2.1.5 (assume split route is two non-ATS Industry Members) and 2.1.6. The guidance also applies to single leg electronic option order reporting.

3.1.1. New Principal Option Order Routed to Exchange and Executed

This scenario illustrates the reporting requirements to CAT for an Industry Member that creates a new principal option order electronically, and electronically routes it to an exchange where it is executed.

For this scenario, Industry Member Broker 1 is required to report the following events:

- The creation of a New Option Order (Principal)
- The route to an exchange as an Option Order Route event



#	Step	Reported Event	Comments
1	Broker 1 creates a New Option Order from its proprietary account	*Broker1 reports a* ***New Option Order event*** type: MONO eventTimestamp: 20180516T133031.127 optionID: ABCD 191220C00095000 orderID: OFP544 deptType: T side: Buy price: 9.95 quantity: 20 orderType: LMT timeInForce: DAY tradingSession: REG firmDesignatedID: 123FPAEXC AccountHolderType: P affiliateFlag: false openCloseIndicator: Open representativeInd: N	

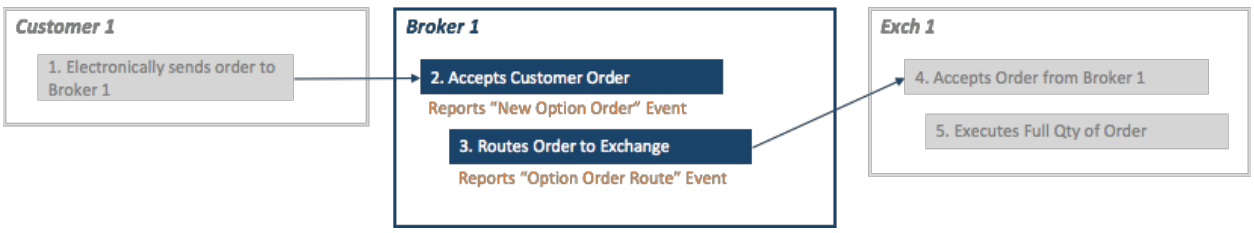
#	Step	Reported Event	Comments
2	Broker 1 routes option order to Exch 1	*Broker 1 reports an **Option Order Route event*** type: MOOR eventTimestamp: 20180516T133031.129 optionID: ABCD 191220C00095000 senderIMID: AEXC destination: OEXCH destinationType: E orderID: OFP544 routedOrderID: RTOFP544 session: 2102 side: Buy price: 9.95 quantity: 20 orderType: LMT timeInForce: DAY tradingSession: REG exchOriginCode: F openCloseIndicator: Open	The following data elements are used to create the linkage key to the exchange: • date: 20180516 • optionID: ABCD 191220C00095000 • senderIMID: AEXC • destination: OEXCH • routedOrderID: RTOFP544 • session: 2101
3	Exch 1 accepts option order from Broker 1	*Exchange reports a Participant **Simple Option Order Accepted event***	
4	Exch 1 executes full quantity of the option order	*Exchange reports a Participant **Simple Option Trade event***	

3.1.2. Customer Option Order Routed to the Exchange

This scenario illustrates the reporting requirements to CAT for an Industry Member that routes a customer order to an exchange.

For this scenario, Industry Member Broker 1 is required to report the following events:
- New Option Order event for the customer order which was received electronically
- Option Order Route event for routing the customer order to the exchange

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

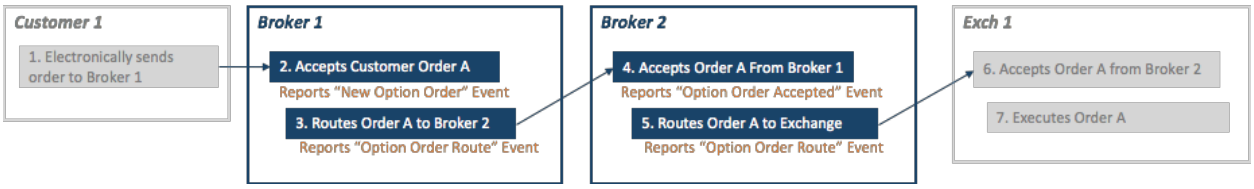


#	Step	Reported Event	Comments
1	Customer electronically sends option order to Broker 1	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a* ***New Option Order event*** type: MONO eventTimestamp: 20180516T133031.1234 optionID: ABCD 190215C00062500 orderID: O54321 deptType: A side: Sell price: 6.60 quantity: 30 minQty: 100 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: NH|STP firmDesignatedID: CUS98765 accountHolderType: A affiliateFlag: true openCloseIndicator: Close representativeInd: N	
3	Broker 1 routes option order to Exch 1	*Broker 1 reports an* ***Option Order Route event*** type: MOOR eventTimestamp: 20180516T133031.1684 optionID: ABCD 190215C00062500 senderIMID: BRKR01 destination: OPEXCH1 destinationType: E orderID: O54321 routedOrderID: RT555 session: s5 side: Sell price: 6.60 quantity: 30 minQty: 100 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: RAR exchOriginCode: C openCloseIndicator: Close	The following data elements are used to create the linkage key to the exchange: • date: 20180516 • optionID: ABCD 190215C00062500 • senderIMID: BRKR01 • destination: OPEXCH1 • routedOrderID: RT555 • session: s5 Since handling instructions do not change from the New Option Order, Broker 1 may use *handlingInstructions* = "RAR" or re-state the original handling instruction values
4	Exch 1 accepts option order from Broker 1	*Exchange reports a Participant* ***Simple Option Order Accepted event***	

#	Step	Reported Event	Comments
5	Exch 1 executes full quantity of the option order	*Exchange reports a Participant* ***Simple Option Trade event***	

3.1.3. Option Order Electronically Routed between Two Industry Members and Subsequently Executed

This scenario illustrates the reporting requirements when an option order is electronically routed from one Industry Member to another.



For this scenario, Industry Member Broker 1 is required to report the following events:

- New Option Order event for the customer order which was received electronically
- Option Order Route event for routing the customer option order to Broker 2

For this scenario, Industry Member Broker 2 is required to report the following events:

- Option Order Accepted event for receiving the client order from Broker 1
- Option Order Route event for routing the order to the Exchange

#	Step	Reported Event	Comments
1	Customer electronically sends option order to Broker 1	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a* ***New Option Order event*** type: MONO eventTimestamp: 20180516T133031.1234 optionID: %XYZ 180601P00095000 orderID: OA1B2C3 deptType: A side: Buy price: 5.5 quantity: 10 orderType: LMT timeInForce: DAY tradingSession: REG firmDesignatedID: C0001 accountHolderType: A affiliateFlag: true 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.

#	Step	Reported Event	Comments
3	Broker 1 routes order to Broker 2	*Broker 1 reports an **Option Order Route event*** type: MOOR eventTimestamp: 20180516T133031.1324 optionID: %XYZ 180601P00095000 senderIMID: BRKR01 destination: BROKER2 destinationType: F orderID: OA1B2C3 routedOrderID: RT0789 side: Buy price: 5.5 quantity: 10 orderType: LMT timeInForce: DAY tradingSession: REG openCloseIndicator: Open	The following data elements are used to link to Broker 2 Option Order Accept event. The values must match the corresponding fields as shown in step #4 below: • date: 20180516 • optionID: %XYZ 180601P00095000 • senderIMID: BRKR01 • destination: BROKER2 • routedOrderID: RT0789 Since Broker 1 is routing to another Industry Member, *session* must not be populated.
4	Broker 2 accepts order from Broker 1	*Broker 2 reports an **Option Order Accepted event*** type: MOOA eventTimestamp: 20180516T133031.2324 optionID: %XYZ 180601P00095000 orderID: O45678 receiverIMID: BROKER2 routingOrigin: BRKR01 routingOriginType: F routedOrderID: RT0789 deptType: A side: Buy price: 5.5 quantity: 10 orderType: LMT timeInForce: DAY tradingSession: REG affiliateFlag: false openCloseIndicator: Open	Broker 2 accepts the order from Broker 1 and internally assigns order ID O45678. The following data elements are used to link to Broker 1 Option Order Route event. The values must match the corresponding fields as shown in step #3 above: • date: 20180516 • optionID: %XYZ 180601P00095000 • receiverIMID: BROKER2 • routingOrigin: BRKR01 • routedOrderID: RT0789 Since Broker 2 received the order from another Industry Member, *session* must not be populated.

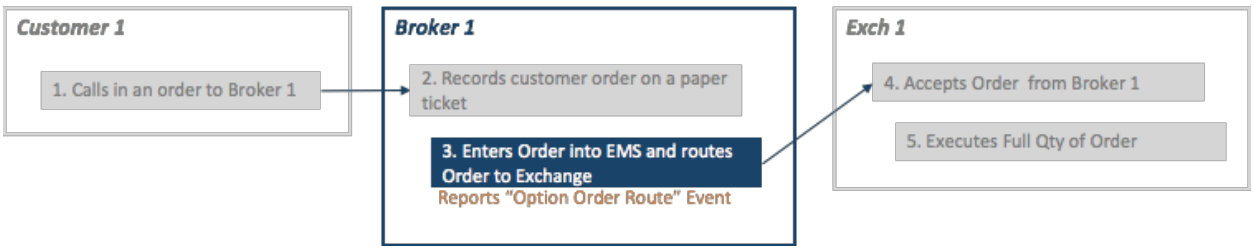
#	Step	Reported Event	Comments
5	Broker 2 routes order to the exchange	*Broker 2 reports an **Option Order Route event*** type: MOOR eventTimestamp: 20180516T133031.2542 optionID: %XYZ 180601P00095000 senderIMID: BROKER2 destination: EXCH1 destinationType: E orderID: O45678 routedOrderID: RT3210 session: s2 side: Buy price: 5.5 quantity: 10 orderType: LMT timeInForce: DAY tradingSession: REG exchOriginCode: C openCloseIndicator: Open	The following data elements are used to create the linkage key to the exchange: • date: 20180516 • optionID: %XYZ 180601P00095000 • senderIMID: BROKER2 • destination: EXCH1 • routedOrderID: RT3210 • session: s2
6	Exch 1 accepts order from Broker 2	*Exchange reports a Participant **Simple Option Order Accepted event***	
7	Exch 1 executes the order	*Exchange reports a Participant **Simple Option Trade event***	

3.1.4. Customer Option Order Manually Received, Routed Electronically

This scenario illustrates the reporting requirements for Phase 2b for a customer order received manually by an Industry Member that is systematized and electronically routed.

For this scenario, Industry Member Broker 1 is required to report the following events:
- Option Order Route event for the route of the option order to the exchange

In Phase 2b, the Option Order Route event must include the *priorUnlinked* = M, indicating the prior step is a manual handling not reported in Phase 2b.

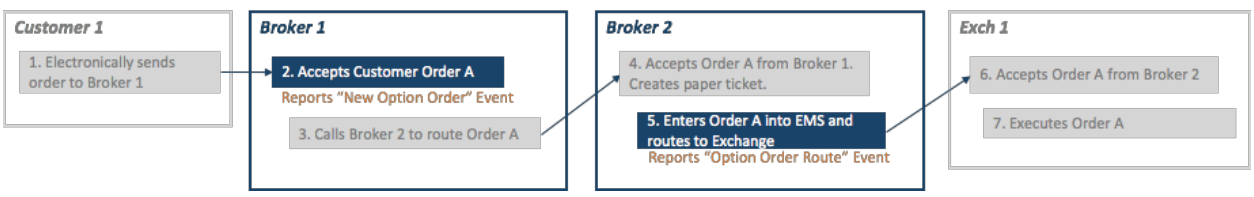


#	Step	Reported Event	Comments
1	Customer calls in an option order to Broker 1	*NA*	

#	Step	Reported Event	Comments
2	Broker 1 manually receives the customer order	*NA*	For Phase 2b, only orders received electronically directly into an order handling or execution system are required for CAT reporting
3	Broker 1 systematizes the order into EMS and routes the order to the Exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR eventTimestamp: 20180516T133033.1234 optionID: XYZ 180601C00001925 senderIMID: BRKR01 destination: EXCH1 destinationType: E orderID: OP23456 routedOrderID: RT05252 session: s56 side: Buy price: 10 quantity: 50 orderType: LMT timeInForce: IOC tradingSession: REG exchOriginCode: C cmtaFirm: 106 openCloseIndicator: Open priorUnlinked: M	The following data elements are used to create the linkage key to the exchange: • date: 20180516 • optionID: XYZ 180601C00001925 • senderIMID: BRKR01 • destination: EXCH1 • routedOrderID: RT05252 • session: s56
4	Exch 1 accepts order from Broker 1	*Exchange reports a Participant **Simple Option Order Accepted event***	
5	Exch 1 executes the order	*Exchange reports a Participant **Simple Option Trade event***	

3.1.5. Customer Option Order Received Electronically, Manually Routed

This scenario illustrates the reporting requirement for Phase 2b for a customer order received electronically by an Industry Member that is manually routed to another Industry Member. The order is then subsequently routed to the exchange.



For this scenario, Industry Member Broker 1 is required to report the following events:

- New Option Order event for the customer order which was received electronically (The *nextUnlinked* flag must be marked as "M" indicating next step is a manual handling so no linkage is available)

For this scenario, Industry Member Broker 2 is required to report the following events:

- Option Order Route event for the route of the option order to the exchange (The *priorUnlinked* flag must be marked as "M" indicating prior step is a manual handling so no linkage is available)

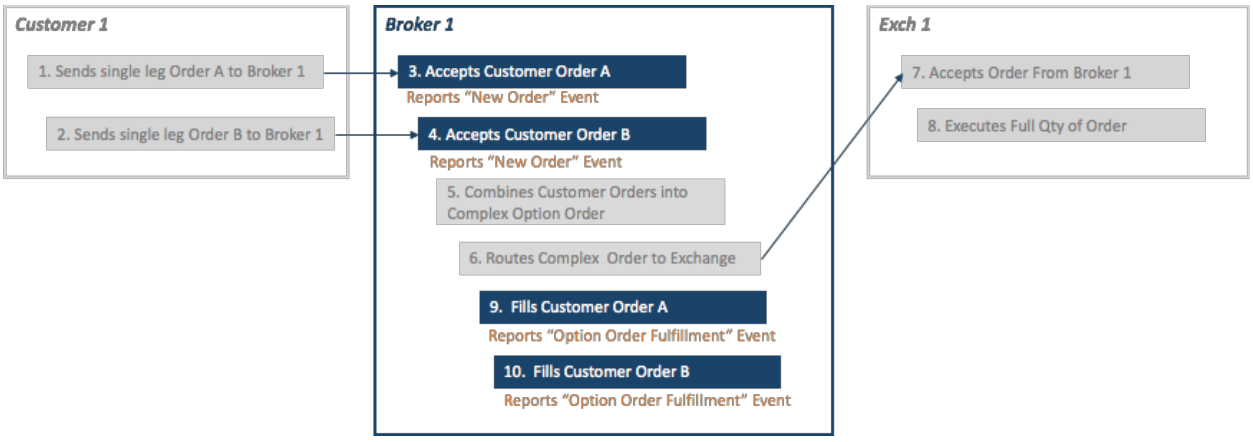
#	Step	Reported Event	Comments
1	Customer electronically sends option order to Broker 1	*NA*	
2	Broker 1 accepts customer order	*Broker 1 reports a* ***New Option Order event*** type: MONO eventTimestamp: 20180516T133031.1234 optionID: XYZ 180810C00001925 orderID: OP0912 deptType: O side: Buy price: 11 quantity: 70 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: NH|STP firmDesignatedID: C0001 accountHolderType: A affiliateFlag: true cmtaFirm: 106 openCloseIndicator: Open representativeInd: N nextUnlinked: M	
3	Broker 1 calls Broker 2 routing the order	*NA*	In Phase 2b, manual routes are out of scope for CAT reporting
4	Broker 2 manually accepts the the order from Broker 1	*NA*	In Phase 2b, manual order receipts are out of scope for CAT reporting

#	Step	Reported Event	Comments
5	Broker 2 systematizes the order and electronically routes the order to an exchange	*Broker 2 reports an **Option Order Route event*** type: MOOR eventTimestamp: 20180516T133035.1256 optionID: XYZ 180810C00001925 senderIMID: FIRM2 destination: EXCH1 destinationType: E orderID: O32BA routedOrderID: RT01111 session: sA2 side: Buy price: 11 quantity: 70 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: NH|STP exchOriginCode: C cmtaFirm: 106 priorUnlinked: M	The following data elements are used to create the linkage key to the exchange: • date: 20180516 • optionID: XYZ 180810C00001925 • senderIMID: FIRM2 • destination: EXCH1 • routedOrderID: RT01111 • session: sA2
6	Exchange 1 accepts the order from Broker 2	*Exchange reports a Participant **Simple Option Order Accepted event***	
7	Exchange 1 executes order	*Exchange reports a Participant **Simple Option Trade event***	

3.2. Fulfillment Scenarios

3.2.1. Broker Receives Single-Leg Electronic Orders, Creates Complex Order and Routes to Exchange

This scenario illustrates the Phase 2b reporting requirements for Industry Members when a complex option order is created from multiple single leg option orders. For Phase 2b, there is no linkage required between the single leg option orders and the complex order.



For this scenario, Industry Member Broker 1 is required to report the following events:

- New Option Order events for each single leg customer order electronically received
- Option Order Fulfillment events for each single leg customer order post execution of the complex order

In Phase 2b, the two New Option Order events must be flagged as *nextUnlinked = C*, indicating that the orders are represented by a complex order so no linkage to the complex order in Phase 2b.

#	Step	Reported Event	Comments
1	Customer 1 electronically sends single leg option order to Broker 1	*NA*	
2	Customer 1 electronically sends single leg option order to Broker 1	*NA*	

#	Step	Reported Event	Comments
3	Broker 1 accepts Order A from Customer 1	*Broker 1 reports a* ***New Option Order event*** type: MONO eventTimestamp: 20180516T133031.1234 optionID: XYZ 180906C00001875 orderID: O10987 deptType: A side: Buy price: 3.90 quantity: 60 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: NH|STP firmDesignatedID: C0001A accountHolderType: A affiliateFlag: true openCloseIndicator: Open representativeInd: N nextUnlinked: C	*nextUnlinked* = C to indicate the next step is not reported because this order was used to create a complex option order
4	Broker 1 accepts Order B from Customer 1	*Broker 1 reports a* ***New Option Order event*** type: MONO eventTimestamp: 20180516T133031.1240 optionID: XYZ 180906P00001875 orderID: O11547 deptType: A side: Buy price: 4.25 quantity: 60 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: NH|STP firmDesignatedID: C0019K accountHolderType: A affiliateFlag: true openCloseIndicator: Open representativeInd: N nextUnlinked: C	*nextUnlinked* = C to indicate the next step is not reported because this order was used to create a complex option order
5	Broker 1 creates a complex option order from Orders A and B	*NA*	Complex orders out of scope in 2b
6	Broker 1 routes complex option order to Exchange 1	*NA*	Complex orders out of scope in 2b

#	Step	Reported Event	Comments
7	Exchange 1 accepts complex option order from Broker 1	*Exchange reports a Participant* ***Complex Option Order Accepted event***	
8	Exchange 1 works and executes complex option order	*Exchange reports Participant execution events for each component of the complex order*	
9	Broker 1 fills Customer Order A	*Broker 1 reports an* ***Option Order Fulfillment event*** type: MOOF eventTimestamp: 20180516T133035.0001 optionID: XYZ 180906C00001875 fulfillmentID: FB10434 quantity: 60 price: 3.90 fulfillmentLinkType: YF clientDetails: orderID: O10987 sideIMID: BROKER1 side: Buy leavesQty: 0 capacity: Agency	The *fulfillmentLinkType* = YF as there is no linkage required on option order fulfillments until a future phase *priorUnlinked* = C to indicate the prior event is not reported as it was for a complex option order
10	Broker 1 fills Customer Order B	*Broker 1 reports an* ***Option Order Fulfillment event*** type: MOOF eventTimestamp: 20180516T133035.0006 optionID: XYZ 180906P00001875 fulfillmentID: FB10435 quantity: 60 price: 4.25 fulfillmentLinkType: YF clientDetails: orderID: O11547 sideIMID: BROKER1 side: Buy leavesQty: 0 capacity: Agency	The *fulfillmentLinkType* = YF as there is no linkage required on option order fulfillments until a future phase *priorUnlinked* = C to indicate the prior event is not reported as it was for a complex option order

3.3. Option Order Modification Scenarios

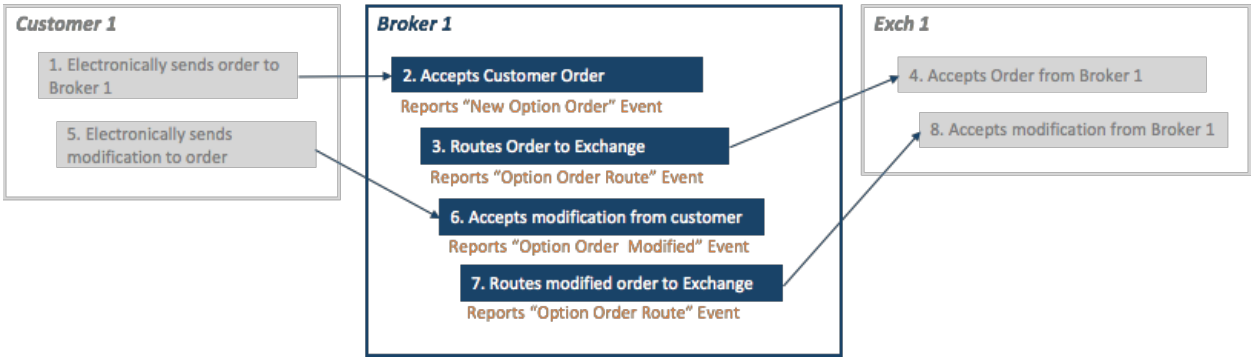
This section illustrates the common scenarios of single-leg option modifications and the CAT reporting requirements for Phase 2b. In addition to the scenarios provided below, please refer to Equity Event Scenarios 2.4.1,2.4.3, and 2.4.4. The guidance also applies to single leg electronic option order reporting.

3.3.1. Customer Initiates Modification of Option Order Previously Routed to the Exchange

This scenario illustrates a customer-initiated modification (electronically) of an option order which the Industry Member had previously routed to an exchange.

In this scenario, Industry Member Broker 1 is required to report the following events:

- A New Option Order event for the electronic receipt of the customer order
- Option Order Route event for the route to the exchange
- An Option Order Modification event for the electronic receipt of the order modification
- A second Option Order Route event for the route of the modified option order to the exchange



#	Step	Reported Event	Comments
1	Customer electronically sends option order to Broker 1	*NA*	

#	Step	Reported Event	Comments
2	Broker 1 accepts customer order	*Broker 1 reports a **New Option Order event*** type: MONO eventTimestamp: 20180516T133031.1234 optionID: XYZ 180906C00001905 orderID: OPA1740 deptType: A side: Buy price: 10.5 quantity: 50 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: NH|STP firmDesignatedID: C0001 accountHolderType: A affiliateFlag: true openCloseIndicator: Open representativeInd: N	
3	Broker 1 routes order to Exchange 1	*Broker 1 reports an **Option Order Route event*** type: MOOR eventTimestamp: 20180516T133031.1434 optionID: XYZ 180906C00001905 senderIMID: FIRM1 destination: EXCH1 destinationType: E orderID: OPA1740 routedOrderID: RTID201 session: s2r1 side: Buy price: 10.5 quantity: 50 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: NH|STP exchOriginCode: C openCloseIndicator: Open	The following data elements are used to create the linkage key to the exchange: • date: 20180516 • optionID: XYZ 180906C00001905 • senderIMID: FIRM1 • destination: EXCH1 • routedOrderID: RTID201 • session: s2r1
4	Exchange 1 accepts order from Broker 1	*Exchange reports a Participant **Simple Option Order Accepted event***	
5	Customer electronically modifies order	*NA*	The customer's modification instructions are directly captured by the firm's electronic system

#	Step	Reported Event	Comments
6	Customer order at the firm is updated per customer's instructions	*Broker 1 reports an **Option Order Modified event*** type: MOOM eventTimestamp: 20180516T133031.1484 optionID: XYZ 180906C00001905 orderID: OPB1740 priorOrderID: OPA1740 initiator: Customer side: Buy price: 10 quantity: 50 leavesQty: 0 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: NH|STP openCloseIndicator: Open representativeInd: N	
7	Broker 1 sends a route to Exchange 1 to update previously sent order details	*Broker 1 reports an **Option Order Route event*** type: MOOR eventTimestamp: 20180516T133031.1500 optionID: XYZ 180906C00001905 senderIMID: FIRM1 destination: EXCH1 destinationType: E orderID: OPB1740 routedOrderID: RTID567 session: s2r1 side: Buy price: 10 quantity: 50 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: NH|STP exchOriginCode: C openCloseIndicator: Open	The following data elements are used to create the linkage key to the exchange: • date: 20180516 • optionID: XYZ 180906C00001905 • senderIMID: FIRM1 • destination: EXCH1 • routedOrderID: RTID567 • session: s2r1
8	Exchange 1 updates order	*Exchange reports a Participant **Option Order Modified event***	

3.4. Cancellation Scenarios

Reporting option order cancellations follow the same guidance as equities. Please refer to Section 2.5 for examples.

3.5. Additional Reporting Scenarios

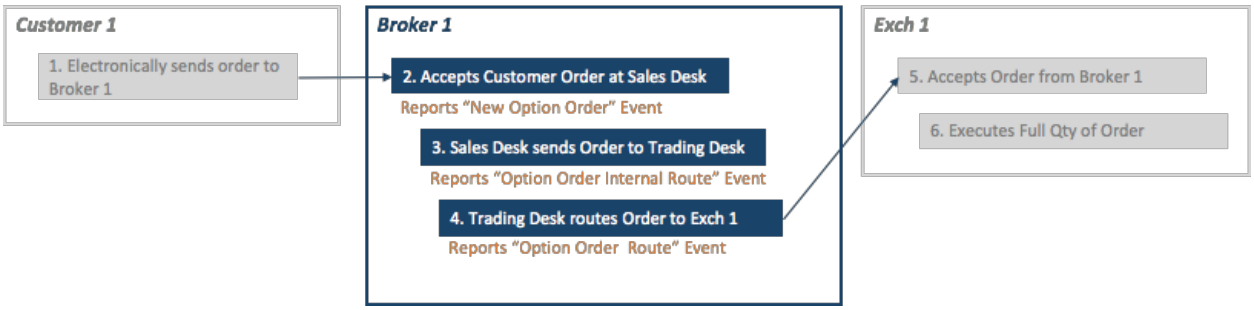
In addition to the scenarios provided below, please refer to Equity Event Scenarios 2.6.1, 2.6.3, 2.6.6, 2.6.7, 2.6.8, and 2.6.9. The guidance also applies to single leg electronic option order reporting.

3.5.1. Customer Option Order Internally Routed Electronically

This scenario illustrates the reporting requirements for CAT when an Industry Member internally routes a customer option order from the sales desk to the trading desk within the same Industry Member firm.

For this scenario, Industry Member Broker 1 is required to report the following events:

- New Option Order event for the customer order which was received electronically
- Option Order Internal Route event from the sales desk to the trading desk
- Option Order Route event for the route of the option order to the exchange



#	Step	Reported Event	Comments
1	Customer electronically sends 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 eventTimestamp: 20180516T133031.1234 optionID: XYZ 190215C00002150 orderID: OS3456 deptType: A side: Buy price: 6.60 quantity: 20 minQty: 10 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: STP firmDesignatedID: CUS98765 accountHolderType: A affiliateFlag: true openCloseIndicator: Close representativeInd: N	

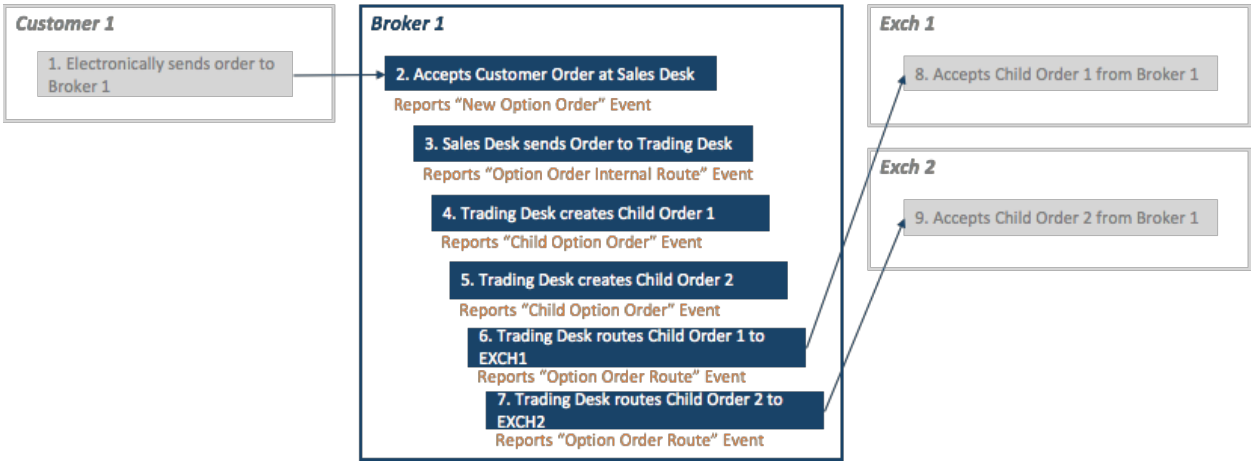
#	Step	Reported Event	Comments
3	Trading Desk accepts the internal route of the order from the Sales Desk	*Broker 1 reports an **Option Order Internal Route event*** type: MOIR eventTimestamp: 20180516T133031.1254 optionID: XYZ 190215C00002150 priorOrderID: OS3456 orderID: OT5459 deptType: T receivingDeskType: T side: Buy price: 6.60 quantity: 20 minQty: 10 orderType: LMT handlingInstructions: STP openCloseIndicator: Open	The *eventTimestamp* is the time at which the Trading Desk received the order The *openCloseIndicator* changes from "Close" to "Open". At the time of order origination, the customer was short, but at the point of time the order is received by the Trading Desk, the customer's position was flat.
4	Trading Desk electronically routes the order to the Exchange	*Broker 1 reports an **Option Order Route event*** type: MOOR eventTimestamp: 20180516T133031.3789 optionID: XYZ 190215C00002150 senderIMID: BRKR01 destination: OPEXCH1 destinationType: E orderID: OT5459 routedOrderID: RT5309 session: s5 side: Buy price: 6.60 quantity: 20 minQty: 10 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: STP exchOriginCode: C openCloseIndicator: Open	The following data elements are used to create linkage key to the exchange: • date: 20180516 • optionID: XYZ 190215C00062500 • senderIMID: BRKR01 • destination: OPEXCH1 • routedOrderID: RT5309 • session: s5
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. Customer Option Order Internally Routed Electronically, Trading Desk Creates Child Orders Prior to Route

This scenario illustrates the reporting requirements for an Industry Member that creates child orders prior to routing the order slices. Child Order events are always electronically created.

For this scenario, Industry Member Broker 1 is required to report the following events:

- New Option Order event for the customer order which was received electronically
- Option Order Internal Route event from the sales desk to the trading desk
- Child Order events for slicing the original order into smaller quantities and assigning new *orderID*s prior to routing from the Trading Desk
- Option Order Route events for the route of each child option order to an exchange



#	Step	Reported Event	Comments
1	Customer electronically sends 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 eventTimestamp: 20180516T133031.1234 optionID: XYZ 190215C00002150 orderID: OS10001 deptType: A side: Buy price: 8.5 quantity: 10 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: STP firmDesignatedID: CUS234 accountHolderType: A affiliateFlag: true openCloseIndicator: Open representativeInd: N	

#	Step	Reported Event	Comments
3	Trading Desk accepts the internal route of the order from the Sales Desk	*Broker 1 reports an **Option Order Internal Route event*** type: MOIR eventTimestamp: 20180516T133031.1254 optionID: XYZ 190215C00002150 priorOrderID: OS10001 orderID: OT56789 deptType: T receivingDeskType: T side: Buy price: 8.5 quantity: 10 orderType: LMT handlingInstructions: STP openCloseIndicator: Open	The *eventTimestamp* is the time at which the Trading Desk received the order
4	Trading Desk creates Child Order 1	*Broker 1 reports a **Child Option Order event (1 of 2)*** type: MOCO eventTimestamp: 20180516T133031.1260 optionID: XYZ 190215C00002150 parentOrderID: OT56789 orderID: CO111 side: Buy price: 8.5 quantity: 7 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: STP openCloseIndicator: Open	
5	Trading Desk creates Child Order 2	*Broker 1 reports a **Child Option Order event (2 of 2)*** type: MOCO eventTimestamp: 20180516T133031.1261 optionID: XYZ 190215C00002150 parentOrderID: OT56789 orderID: CO222 side: Buy price: 8.5 quantity: 3 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: STP openCloseIndicator: Open	

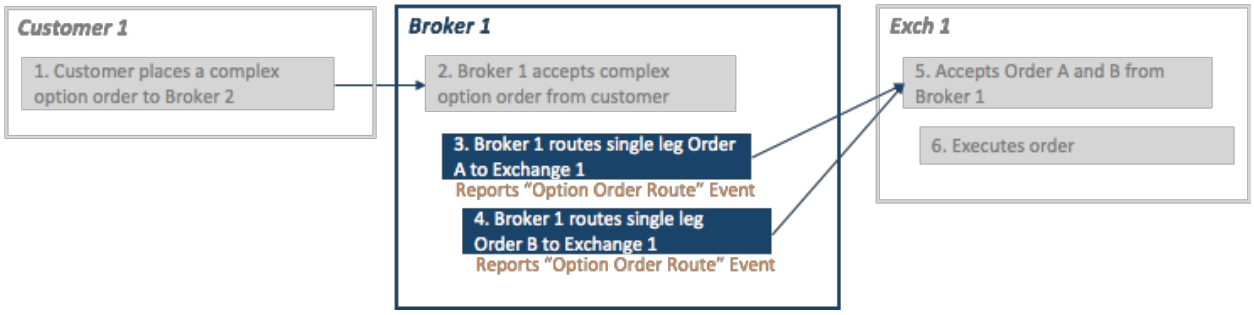
#	Step	Reported Event	Comments
6	Trading Desk routes Child Order 1 to EXCH 1	*Broker 1 reports an* ***Option Order Route event*** type: MOOR eventTimestamp: 20180516T133031.1360 optionID: XYZ 190215C00002150 senderIMID: BRKR01 destination: OPEXCH1 destinationType: E orderID: CO111 routedOrderID: RT432 session: s101 side: Buy price: 8.5 quantity: 7 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: STP exchOriginCode: C openCloseIndicator: Open	The following data elements are used to create linkage key to the exchange: • date: 20180516 • optionID: XYZ 190215C00002150 • senderIMID: BRKR01 • destination: OPEXCH1 • routedOrderID: RT432 • session: s101
7	Trading Desk routes Child Order 2 to EXCH 2	*Broker 1 reports an* ***Option Order Route event*** type: MOOR eventTimestamp: 20180516T133031.1365 optionID: XYZ 190215C00002150 senderIMID: BRKR01 destination: OPEXCH2 destinationType: E orderID: CO222 routedOrderID: RT369 session: s5 side: Buy price: 8.5 quantity: 3 orderType: LMT timeInForce: DAY tradingSession: REG handlingInstructions: STP exchOriginCode: C openCloseIndicator: Open	The following data elements are used to create linkage key to the exchange: • date: 20180516 • optionID: XYZ 190215C00002150 • senderIMID: BRKR01 • destination: OPEXCH2 • routedOrderID: RT369 • session: s5
8	EXCH1 accepts order from Broker 1	*Exchange 1 reports a Participant* ***Simple Option Order Accepted event***	
9	EXCH2 accepts order from Broker 1	*Exchange 2 reports a Participant* ***Simple Option Order Accepted event***	

3.5.3. Industry Member Receives Complex Option Order, Splits into Individual Single Order Legs to be Worked in the Customer's Account

This scenario illustrates the reporting requirements for an Industry Member in Phase 2b that receives a complex option order but routes single leg option orders directly from the customer's account to the exchange without creating new single leg option orders. Linkage between the original complex option order and the single leg option order routes is not required in Phase 2b, but reporters must indicate on the Option Order Route event there is no prior step reported since it was a complex order by populating field *priorUnlinked* = C. Since the single leg orders were routed to the exchange as single legs, linkage to the related single leg exchange order is required.

In this scenario, Industry Member Broker 1 is required to report the following events:

- Option Order Route events for each single leg option order routed to the exchange



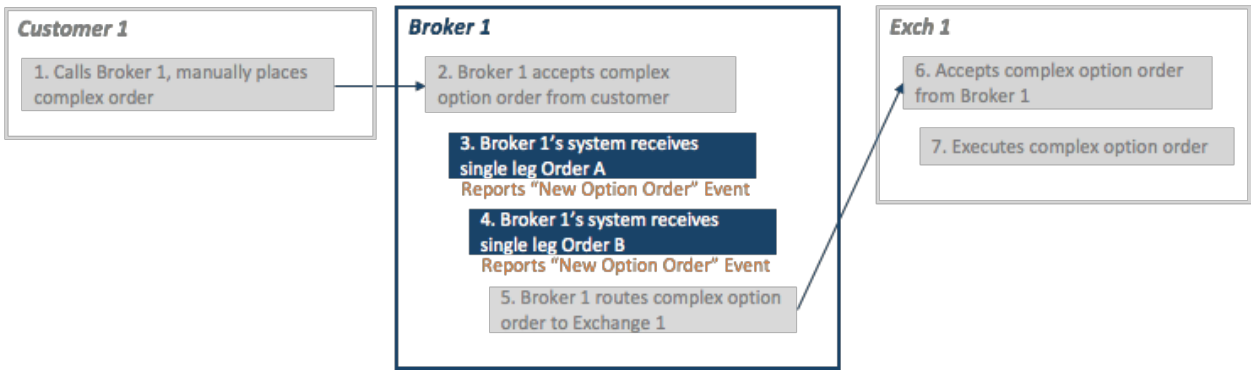
#	Step	Reported Event	Comments
1	Customer sends a complex option order to Broker 1	*NA*	Complex options out of scope for Phase 2b
2	Broker 1 accepts complex option order	*NA*	Complex options out of scope for Phase 2b

#	Step	Reported Event	Comments
3	Broker 1 routes Order A to Exchange 1	*Broker 1 reports an* ***Option Order Route event*** type: MOOR eventTimestamp: 20180516T133031.1254 optionID: XYZ 180810C00001925 senderIMID: BKRF1 destination: EXCH1 destinationType: E orderID: OA1234 routedOrderID: RTOA1 session: s.012.5 side: Buy price: 10 quantity: 50 orderType: LMT timeInForce: GTC tradingSession: REG exchOriginCode: P cmtaFirm: 106 openCloseIndicator: Open priorUnlinked: C	*priorUnlinked* = C to indicate the prior event in the order lifecycle was a complex option (out of scope for Phase 2b) The following data elements are used to create the linkage key to the exchange: • date: 20180516 • optionID: XYZ 180810C00001925 • senderIMID: BKRF1 • destination: EXCH1 • routedOrderID: RTOA1 • session: s.012.5
4	Broker 1 routes Order B to Exchange 1	*Broker 1 reports an* ***Option Order Route event*** type: MOOR eventTimestamp: 20180516T133031.1235 optionID: XYZ 180810P00001925 senderIMID: BKRF1 destination: EXCH2 destinationType: E orderID: OB1234 routedOrderID: RTOB1 session: s.012.6 side: Buy price: 10.5 quantity: 50 orderType: LMT timeInForce: GTC tradingSession: REG exchOriginCode: P cmtaFirm: 106 openCloseIndicator: Open priorUnlinked: C	*priorUnlinked* = C to indicate the prior event in the order lifecycle was a complex option (out of scope for Phase 2b) The following data elements are used to create linkage key to the exchange: • date: 20180516 • optionID: XYZ 180810P00001925 • senderIMID: BKRF1 • destination: EXCH2 • routedOrderID: RTOB1 • session: s.012.6
5	Exchange 1 accepts Order A and Order B from Broker 1	*Exchange 1 reports a Participant* ***Simple Option Order Accepted event***	
6	Exchange 1 executes the option orders	*Exchange 1 reports a Participant* ***Simple Option Trade event***	

3.5.4. Industry Member Receives Complex Option Order, but Client Sends Multiple Single Leg Option Orders Electronically

This scenario illustrates the reporting requirements for an Industry Member that receives a complex order that is routed by the Industry Member to an exchange as a complex order but where the client sends single leg electronic messages due to limitations in the client's system.

For Phase 2b, reporting this order is out of scope as it was intended to be handled as a complex order. In Phase 2b, the preferred approach is that the Industry Member not report the electronic single leg orders as complex orders are not in scope. However, if Industry Member's elects to report the single legs, they must populate *handlingInstruction* 'CMPX' and include the *nextUnlinked* = 'C', to indicate there is no linkage to additional order events as subsequent handling was at the complex order level.



#	Step	Reported Event	Comments
1	Customer calls in a complex option order to Broker 1	*NA*	Complex options out of scope for Phase 2b
2	Broker 1 accepts complex option order	*NA*	Complex options out of scope for Phase 2b

#	Step	Reported Event	Comments
3	Broker 1's system electronically captures single leg option order A	*Broker 1 reports a **New Option Order event*** type: MONO eventTimestamp: 20180516T133031.1234 optionID: XYZ 180810C00001925 orderID: OA1234 deptType: A side: Buy price: 10 quantity: 50 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX firmDesignatedID: FD0012 accountHolderType: A affiliateFlag: true cmtaFirm: 106 openCloseIndicator: Open representativeInd: N nextUnlinked: C	Marking the handlingInstructions as "CMPX" is required Phase 2b. Field *nextUnlinked* = C since this order was further handled as a complex order.
4	Broker 1's system electronically captures single leg option order B	*Broker 1 reports a **New Option Order event*** type: MONO eventTimestamp: 20180516T133031.1235 optionID: XYZ 180810P00001925 orderID: OB1234 deptType: A side: Buy price: 10.5 quantity: 50 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX firmDesignatedID: FD0012 accountHolderType: A affiliateFlag: true cmtaFirm: 106 openCloseIndicator: Open representativeInd: N nextUnlinked: C	Marking the handlingInstructions as "CMPX" is required Phase 2b. Field *nextUnlinked* = C since this order was further handled as a complex order.
5	Broker 1 routes complex order to Exchange 1	*NA*	Complex options out of scope for Phase 2b
6	Exchange 1 accepts complex option order from Broker 1	*Exchange 1 reports a Participant **Complex Option Order Accepted event***	

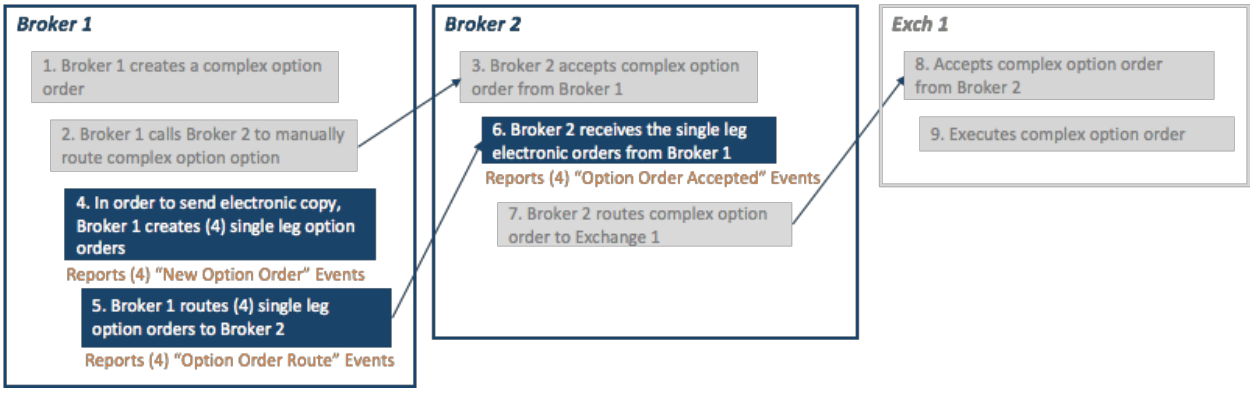
#	Step	Reported Event	Comments
7	Exchange 1 executes complex option order	*Exchange 1 reports a Participant* ***Complex Option Trade event***	

3.5.5. Industry Member Routes Multiple Single Leg Option Orders to another Industry Member, Calls with Complex Order Instructions

This scenario illustrates the reporting requirements for Phase 2b when a complex order is routed manually between two Industry Members, but the related electronic order messages are sent and received as single leg option orders. In Phase 2b, the preferred approach is that the Industry Member not report the electronic single leg orders as complex orders are not in scope. However, if Industry Member's elects to report the single legs, they must include *handlingInstruction* = 'CMPX'. The sending Industry Member must populate *nextUnlinked* = C on the Option Order Routes events, as no linkage will be available to the complex order at the receiving broker. Similarly, the receiving Industry Member should populate *priorUnlinked* = C on the Option Order Accepted events.

In this scenario, if suppression of the electronic message is not possible, Industry Member Broker 1 would report the following events:
- Four (4) New Option Order events for the electronic single leg orders
- Four (4) Option Order Route events for the route of the single leg orders to Broker 2

Industry Member Broker 2 would report the following events:
- Four (4) Option Order Accepted events for the electronic routes received from Broker 1



#	Step	Reported Event	Comments
1	Broker 1 creates a complex option order	*NA*	Complex options out of scope for Phase 2b
2	Broker 1 calls Broker 2 to manually route the complex option order	*NA*	Complex options out of scope for Phase 2b Manual order events out of scope for Phase 2b

#	Step	Reported Event	Comments
3	Broker 2 accepts complex option order	*NA*	Complex options out of scope for Phase 2b Manual order events out of scope for Phase 2b
4	Broker 1 creates four (4) single leg option orders	*Broker 1 reports a **New Option Order event (1 of 4)*** type: MONO eventTimestamp: 20180516T133031.1234 optionID: XYZ 180810C00001925 orderID: O12345 deptType: A side: Buy price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX firmDesignatedID: PROP203 AccountHolderType: P affiliateFlag: false cmtaFirm: 106 openCloseIndicator: Open representativeInd: N *Broker 1 reports a **New Option Order event (2 of 4)*** type: MONO eventTimestamp: 20180516T133031.1235 optionID: XYZ 180810P00001925 orderID: O22345 deptType: A side: Buy price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX firmDesignatedID: PROP203 accountHolderType: P affiliateFlag: false cmtaFirm: 106 openCloseIndicator: Open representativeInd: N	Must include *handlingInstructions* "CMPX". Note that within Broker 1, the New Option Order events for the single leg orders will link to the Option Order Route events each single leg order. Therefore, *nextUnlinked* is not required on the New Option Order events.

#	Step	Reported Event	Comments
4	(cont'd)	*Broker 1 reports a **New Option Order event (3 of 4)*** type: MONO eventTimestamp: 20180516T133031.1236 optionID: XYZ 181210C00001925 orderID: O32345 deptType: A side: Buy price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX firmDesignatedID: PROP203 accountHolderType: P affiliateFlag: false cmtaFirm: 106 openCloseIndicator: Open representativeInd: N *Broker 1 reports a **New Option Order event (4 of 4)*** type: MONO eventTimestamp: 20180516T133031.1237 optionID: XYZ 181210P00001925 orderID: O42345 deptType: A side: Buy price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX firmDesignatedID: PROP203 accountHolderType: P affiliateFlag: false cmtaFirm: 106 openCloseIndicator: Open representativeInd: N	

#	Step	Reported Event	Comments
5	Broker 1 routes the electronic single leg orders to Broker 2	*Broker 1 reports an **Option Order Route event (1 of 4)*** type: MOOR eventTimestamp: 20180516T133031.5234 optionID: XYZ 180810C00001925 senderIMID: BKRF1 destination: BKRK_2 destinationType: F orderID: O12345 routedOrderID: RTOA111 side: Buy price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX cmtaFirm: 106 openCloseIndicator: Open nextUnlinked: C *Broker 1 reports an **Option Order Route event (2 of 4)*** type: MOOR eventTimestamp: 20180516T133031.5235 optionID: XYZ 180810P00001925 senderIMID: BKRF1 destination: BKRK_2 destinationType: F orderID: O22345 routedOrderID: RTOA222 side: Buy price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX cmtaFirm: 106 openCloseIndicator: Open nextUnlinked: C	Must include *handlingInstructions* "CMPX". Field *nextUnlinked* = C since this may be received as complex option order.

#	Step	Reported Event	Comments
5	(cont'd)	*Broker 1 reports an **Option Order Route event (3 of 4)*** type: MOOR eventTimestamp: 20180516T133031.5236 optionID: XYZ 181210C00001925 senderIMID: BKRF1 destination: BKRK_2 destinationType: F orderID: O32345 routedOrderID: RTOA333 side: Buy price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX cmtaFirm: 106 openCloseIndicator: Open nextUnlinked: C *Broker 1 reports an **Option Order Route event (4 of 4)*** type: MOOR eventTimestamp: 20180516T133031.5237 optionID: XYZ 181210P00001925 senderIMID: BKRF1 destination: BKRK_2 destinationType: F orderID: O42345 routedOrderID: RTOA444 side: Buy price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX cmtaFirm: 106 openCloseIndicator: Open nextUnlinked: C	

#	Step	Reported Event	Comments
6	Broker 2 accepts the electronic single leg option orders routed from Broker 1	*Broker 2 reports an **Option Order Accepted event (1 of 4)*** type: MOOA eventTimestamp: 20180516T133031.5434 optionID: XYZ 180810C00001925 orderID: O10987 receiverIMID: BRKR_2 routingOrigin: BKRF1 routingOriginType: F routedOrderID: RTOA111 deptType: A side: Buy price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX affiliateFlag: false openCloseIndicator: Open priorUnlinked: C nextUnlinked: C *Broker 2 reports an **Option Order Accepted event (2 of 4)*** type: MOOA eventTimestamp: 20180516T133031.5435 optionID: XYZ 180810P00001925 orderID: O20987 receiverIMID: BRKR_2 routingOrigin: BKRF1 routingOriginType: F routedOrderID: RTOA222 deptType: A side: Buy price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX affiliateFlag: false openCloseIndicator: Open priorUnlinked: C nextUnlinked: C	Field *priorUnlinked* = C since this is received with instructions to work as complex option order. The field *nextUnlinked* = C is required to show that no subsequent events will be reported when the order is handled as a complex option.

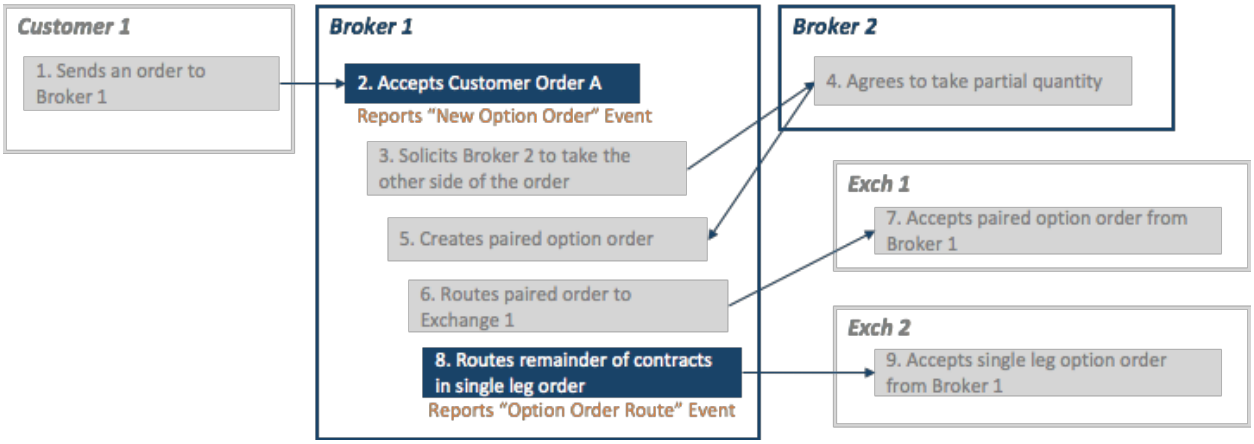
#	Step	Reported Event	Comments
6	(cont'd)	*Broker 2 reports an **Option Order Accepted event (3 of 4)*** type: MOOA eventTimestamp: 20180516T133031.5436 optionID: XYZ 181210C00001925 orderID: O30987 receiverIMID: BRKR_2 routingOrigin: BKRF1 routingOriginType: F routedOrderID: RTOA333 deptType: A side: Buy price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX affiliateFlag: false openCloseIndicator: Open priorUnlinked: C nextUnlinked: C *Broker 2 reports an **Option Order Accepted event (4 of 4)*** type: MOOA eventTimestamp: 20180516T133031.5437 optionID: XYZ 181210P00001925 orderID: O40987 receiverIMID: BRKR_2 routingOrigin: BKRF1 routingOriginType: F routedOrderID: RTOA444 deptType: A side: Buy price: 10 quantity: 20 orderType: LMT timeInForce: GTC tradingSession: REG handlingInstructions: CMPX affiliateFlag: false openCloseIndicator: Open priorUnlinked: C nextUnlinked: C	

#	Step	Reported Event	Comments
7	Broker 2 routes the complex option order to Exchange 1	*NA*	Complex options out of scope for Phase 2b
8	Exchange 1 accepts order from Broker 2	*Exchange 1 reports a Participant* ***Complex Option Order Accepted event***	
9	Exchange 1 executes complex option order	*Exchange 1 reports a Participant* ***Complex Option Trade event***	

3.5.6. Industry Member Solicits Order, Creates Paired Option for Partial Quantity

This scenario illustrates the reporting requirements for an Industry Member that electronically received a single leg order from a customer, solicits another Industry Member to pair the order, but is left with a partial quantity of the single leg order still to work. Only the single leg components of the lifecycle are required for CAT reporting in Phase 2b, as paired option orders are not required until Phase 2d.

In this scenario, Industry Member Broker 1 is required to report the following events:
- New Option Order event for the receipt of the customer order
- Option Order Route for the un-paired quantity of the single leg order



#	Step	Reported Event	Comments
1	Customer electronically sends option order to Broker 1	*NA*	

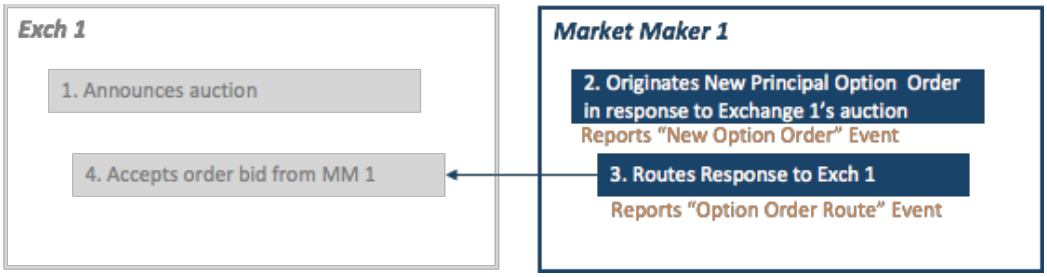
#	Step	Reported Event	Comments
2	Broker 1 accepts customer order	*Broker 1 reports a* ***New Option Order event*** type: MONO eventTimestamp: 20180516T133031.1234 optionID: XYZ 180810C00001925 orderID: OA76543 deptType: A side: Buy price: 8.5 quantity: 100 orderType: LMT timeInForce: DAY tradingSession: REG firmDesignatedID: CUS458 accountHolderType: A affiliateFlag: false openCloseIndicator: Open representativeInd: N	Note that *nextUnlinked* is **not** populated as part of the order is still worked as single leg orders and therefore is eligible for linkage
3	Broker 1 solicits Broker 2 to take other side of order	*NA*	
4	Broker 2 agrees to 60 contracts	*NA*	
5	Broker 1 creates a paired option order for 60 contracts	*NA*	Paired option orders are not reportable until Phase 2d
6	Broker 1 routes paired option order to the exchange	*NA*	Paired option orders are not reportable until Phase 2d
7	Exchange 1 accepts paired option order from Broker 1	*Exchange 1 reports two Participant* ***Simple Option Order Accepted events***	

#	Step	Reported Event	Comments
8	Broker1 routes single leg option order to the exchange	*Broker 1 reports an* ***Option Order Route event*** type: MOOR eventTimestamp: 20180516T133032.1234 optionID: XYZ 180810C00001925 senderIMID: BROKER1 destination: EXCH2 destinationType: E orderID: OA76543 routedOrderID: RT7171 session: s9 side: Buy price: 8.5 quantity: 40 orderType: LMT timeInForce: DAY tradingSession: REG exchOriginCode: C openCloseInd: Open	The following data elements are used to create linkage key to the exchange: • date: 20180516 • optionID: XYZ 180810C00001925 • senderIMID: BROKER1 • destination: EXCH2 • routedOrderID: RT7171 • session: s9
9	Exchange 2 accepts single leg order from Broker 1	*Exchange 1 reports a Participant* ***Single Option Order Accepted event***	

3.5.7. Response to an Exchange Auction

This scenario illustrates the reporting requirements for a proprietary option order created in response to an Exchange Auction of a simple option or paired order of simple options. Responses to the complex auctions are deferred until 2D. The Industry Member must include the auction details on the *handlingInstructions* when reporting to CAT.

In this scenario, Industry Member Market Maker 1 is required to report the following events:
- New Option Order event for the creation of the proprietary order
- Option Order Route event for the response to the exchange auction



#	Step	Reported Event	Comments
1	Exchange 1 announces auction	*NA*	The exchange will provide the Auction ID, 1a95, with announcement

#	Step	Reported Event	Comments
2	Market Maker 1 originates prop option order in response to the auction	*Market Maker 1 reports a* ***New Option Order Event*** type: MONO eventTimestamp: 20180516T133031.1234 optionID: XYZ 180810C00001925 orderID: OA76543 deptType: T side: Buy price: 5 quantity: 10 orderType: LMT timeInForce: IOC tradingSession: REG handlingInstructions: AucResp=1a95|FOK firmDesignatedID: P999 accountHolderType: P affiliateFlag: true openCloseIndicator: Open representativeInd: N	Options order originated to respond to an auction must include *handlingInstructions* Name/Value pair AucResp with the auction ID
3	Market Maker 1 routes response to Exchange 1	*Market Maker 1 reports an* ***Option Order Route event*** type: MOOR eventTimestamp: 20180516T133031.1834 optionID: XYZ 180810C00001925 senderIMID: MMFIRM1 destination: EXCH1 destinationType: E orderID: OA76543 routedOrderID: RTBID01 session: s12 side: Buy price: 5 quantity: 10 orderType: LMT timeInForce: IOC tradingSession: REG handlingInstructions: RAR exchOriginCode: M openCloseIndicator: Open	The AucResp must be populated on the Option Order Route event. In this scenario, the reporter uses "RAR" since all handling instructions on the Option Order Route match those on the New Option Order
4	Exchange 1 accepts order bid from Market Maker 1	*Exchange 1 reports a Participant* ***Simple Option Order Accepted event***	