NYSE Options Risk Output
Interface Requirement Specification

NYSE Arca Options

NYSE American Options

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Document Version 2.0

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General Information

Background

This document outlines the Options Risk report output which contains information on daily risk controls including risk entity threshold limits and actions taken in the event a limit has been breached such as blocking of new orders, order cancellation or risk entity reinstatements. The Options Risk report is available for both Pillar Options Markets (NYSE ARCA and when applicable NYSE AMEX). Customers may subscribe by either:

1. Entering Firm - single MPID level or Firm CRD Level

2. Market Maker - single MMID level or Firm CRD Level or

3. Clearing Firm - single Clearing Number only.

Note: Clearing Level output will only contain reference data events based on clearing arrangements set at an MPID level. Events based on an alternate clearing # will not be included.

Naming Conventions and Formatting

1. Output files will be made available for secure pick-up via Managed File Transfer (MFT).

2. All files will be comma delimited and will not be sorted.

3. Header records will not be provided.

4. Output can be made available for each Options Market.

5. Output files are named according to the Convention below:

    a. <MIC>_RISK_<Filter>_<RptType>_<MFTID>_YYYYYMMDD_Vx.dat.gz

        i.   Where MIC = ARCO for Arca and AMXO for Amex.

        ii. Filter = Firm Type

        iii. Report Type designates reporting level (e.g., CRD, MPID, MMID or Clearing#)

    b. Example:

        i.   ARCO_RISK_EF_<MPID>_<MFTID>_YYYYMMDD_Vx.dat.gz

        ii. ARCO_RISK_EF_<CRD>_<MFTID>_YYYYMMDD_Vx.dat.gz

        iii. ARCO_RISK_MM_<MMID>_<MFTID>_YYYYMMDD_Vx.dat.gz

        iv. ARCO_RISK_MM_<CRD>_<MFTID>_YYYYMMDD_Vx.dat.gz

        v.   ARCO_RISK_CF_<Clearing#>_<MFTID>_YYYYMMDD_Vx.dat.gz

6. Output Files will be available by 11 p.m.

7. As new enhancements are made to these outputs, customers may expect to receive both current and new versions in their MFT file folder. All new versions will be tagged with a version number which will then allow the customer to migrate to the new file format when ready. Advance notification of dates will be provided with a minimum of 30 day notice dependent upon size and scope of changes.

8. After the migration timeframe has expired, customers will see only the latest version in their MFT folders.

Contact Information

Firms may request to subscribe to any of the outputs by contacting NYSE-CustomerOutput@theice.com.

RISK Report Message Events

This section defines the record formats for each event found in the Risk Output file.

Threshold and Breach Event [RTB]

An RTB record will be provided whenever a risk entity has breached any pre-set threshold. A single record will be provided for each individual risk entity within the system for each credit control type.

This event is applicable to Entering Firm and Market Maker Outputs only.

#	Field Name	Field Description	Data Format	Valid Value
1	Event Type	Record Identifier	Varchar(10)	RTB: Pre-Trade Risk Daily Thresholds and Breaches
2	Message Sequence #	Unique Message Sequence number for the Symbol used for sorting/sequencing.	Number(20)	
3	Source Exchange	Market Code - Identifies the exchange of the event.	Varchar(10)	ARCO =ARCA Options AMXO = AMEX Options
4	Trade Date	Trade Date of the event.	Number(10)	Trade Date: YYYYMMDD
5	Event Timestamp	Timestamp at the end of day when the daily stats are computed and logged per Risk Entity.	Timestamp	This is the timestamp in Nano-seconds: YYYY-MM-DD hh:mm:ss:nnnnnnnnn
6	Risk Entity	Risk Entity which has exceeded the threshold or breach limit.	Varchar(40)	The Risk Entity is setup by the Risk user and can be from a combination of MPID, MMID, SubID & Underlying Symbol. Examples: MPID MPID + SubID MPID + MMID Underlying Symbol + MPID Underlying Symbol + MPID + MMID
7	Underlying Symbol	Underlying Symbol on the Risk Entity.	Varchar (8)	

#	Field Name	Field Description	Data Format	Valid Value
8	Risk Entity - MPID	This is the MPID on the Risk Entity	Varchar(6)	This is as provided on the OnBehalfCompID/115/MPID field of the NGWYs.
9	Risk Entity - MMID	This is the MMID on the Risk Entity	Varchar(6)	
10	Risk Entity - Risk SubID	This is the Risk SubID on the Risk Entity. (if applicable)	Varchar(8)	This is as provided on the OnBehalfSubID/116/MPSubID field for NGWYs.
11	Risk Entity - Floor Broker Firm	This is the CRD of the floor-broker firm.	Varchar(12)	Not applicable for Options
12	Clearing Number	This is the clearing number associated with this MPID.	Varchar(4)	
13	Risk Entity User/ Owner	Owner (CRD) of the risk limits on the risk entity that has resulted in the threshold/breach.	Number(10)	
14	Risk Entity User Type/Role	Role of the risk entity user whose limits have exceeded the threshold or breach limits.	Varchar(1)	E - Entering firm C - Clearing firm F - Floor broker firm O - Options MM Firm
15	Risk/Control Type	This is the credit control type on the risk entity which has exceeded the threshold or breached the same for the below Breach Action.	Number(2)	5 - Gross Credit Limit: Open Orders and Executions 8 - Rolling Transaction 9 - Rolling Volume 10 - Rolling Percent 11 - Global Risk Mitigation Protection for Transaction/Volume/Percentage 15 - Single order arbitrage check 16 - Single order intrinsic check For future use: 3 - Gross Credit: Executed Only 4 - Gross Credit: Open Only

#	Field Name	Field Description	Data Format	Valid Value
16	Breach Action	Breach Action: These are the Breach actions against the credit controls being tracked on this event, that have exceeded the thresholds or breached the same.	Number(1)	1 - Notifications Only 2 - Cancel Non-Auction orders and Block Risk Entity. 3 - Block Risk Entity
17	Risk Limit	Configured Risk Limit for the Risk Entity for the Credit Control Type and Breach action (which has now exceeded the threshold/breached).	Number(22,0)	
18	Notification Type	This is the Notification type i.e., threshold % exceeded or breach on the Risk Entity for the Risk Control Type & Breach Action. This field supports the actual numeric value (percentage) of breach.	Number(3)	50 = Threshold - exceeded 50% 75 = Threshold - exceeded 75% 90 = Threshold - exceeded 90% 100 = Breach - exceeded 100%
19	Gross Total	This is the gross total amount ($ value) calculated in Pillar which has resulted in exceeding the threshold/breach limits for the corresponding credit risk control type.	Number(22,0)	
20	Gross Total: Auction Only	Gross Total of Auction only orders at the time of exceeding the threshold or breach limit for the credit control tracked on this RTB event.	Number(22,0)	
21	Notified Risk User Entity	Risk user (CRD) receiving the threshold/breach message (and can be different from the Risk Entity user who is the owner of the limit that has exceeded threshold/breach limit).	Number(10)	
22	User Type/Role	Identifies the type of user receiving the threshold/breach message.	Varchar(1)	E - Entering firm C - Clearing firm F - Floor broker firm O - Options MM Firm

Kill Switch and Reinstatement Event [RMAN]

The RMAN records will be provided when either 1) a manual reinstatement approval is received or 2) a kill switch option such as Block/Unblock Risk Entity, or 3) Cancel Auction Orders and Cancel Non-Auction orders is received from a Firm.

This event is applicable to Entering Firm and Market Making Firm output only.

#	Field Name	Field Description	Data Format	Valid Value
1	Event Type	Record Identifier	Varchar(10)	RMAN: Pre-Trade Risk Daily Manual Kill Switch and Reinstatement States
2	Message Sequence #	Unique Message Sequence number for the Symbol used for sorting/sequencing.	Number(20)	
3	Source Exchange	Market Code - Identifies the exchange of the event.	Varchar(10)	ARCO =ARCA Options AMXO = AMEX Options
4	Trade Date	Trade Date of the event.	Number(10)	YYYYMMDD
5	Event Timestamp	This represents the timestamp the Risk User initiated the Kill Switch or reinstatement action from either the UI or the Risk API.	Timestamp	This is the timestamp in Nano-seconds: YYYY-MM-DD hh:mm:ss.nnnnnnnnn
6	Risk Entity	Risk Entity which has exceeded the threshold or breach limit.	Varchar(40)	The Risk Entity is setup by the Risk user and can be from a combination of MPID, MMID, SubID & Underlying Symbol. Examples: MPID MPID + SubID MPID + MMID Underlying Symbol + MPID Underlying Symbol + MPID + MMID Underlying Symbol + MPID + SubID
7	Underlying Symbol	Underlying Symbol on the Risk Entity.	Varchar (8)	
8	Risk Entity - MPID	This is the MPID on the Risk Entity	Varchar(6)	

#	Field Name	Field Description	Data Format	Valid Value
9	Risk Entity - MMID	This is the MMID on the Risk Entity	Varchar(6)	
10	Risk Entity - Risk SubID	This is the Risk SubID on the Risk Entity. (if applicable)	Varchar(8)	
11	Risk Entity - Floor Broker Firm	This is the CRD of the floor-broker firm.	Varchar(12)	Not applicable for Options
12	Clearing Number	This is the clearing number associated with this MPID.	Varchar(4)	
13	Kill Switch/Reinstatement Command	Action initiated by the Risk User.	Varchar(1)	B - Block Risk Entity U - Un-Block Risk Entity N - Cancel Non-Auction orders A - Cancel Auction orders R - Risk user reinstatement approval G = Cancel GTC Orders
14	Risk User	CRD of the user who initiated the Kill Switch or reinstatement command. This provides the CRD of the firm associated with initiating the kill switch or reinstatement.	Number(10)	CRD will be 0 when action is performed by superuser
15	User Type/Role	Identifies the type of user performing the manual action.	Varchar(1)	E - Entering firm C - Clearing firm F - Floor broker firm O - Options MM Firm S - Super User
16	Risk Update Source	Identifies the Kill Switch risk option initiated from TOP or via the Risk API.	Varchar(5)	TOP API TDM

Reinstatement Event [RRI]

The RRI record will be provided when a reinstatement of a risk entity following a credit breach has been approved/received.

This event is applicable to Entering Firm and Market Making Firm output only.

#	Field Name	Field Description	Data Format	Valid Value
1	Event Type	Record Identifier	Varchar(10)	RRI: Pre-Trade Risk Daily Reinstatement Activity
2	Message Sequence #	Unique Message Sequence number for the Symbol used for sorting/sequencing.	Number(20)	
3	Source Exchange	Market Code - Identifies the exchange of the event.	Varchar(10)	ARCO =ARCA Options AMXO = AMEX Options
4	Trade Date	Trade Date of the event.	Number(10)	YYYYMMDD
5	Event Timestamp	This is the matching engine timestamp when the Risk entity was reinstated after all the firm/user approvals.	Timestamp	This is the timestamp in Nano-seconds: YYYY-MM-DD hh:mm:ss:nnnnnnnnn
6	Risk Entity	Risk Entity which has exceeded the threshold or breach limit.	Varchar(40)	The Risk Entity is setup by the Risk user and can be from a combination of MPID, MMID, SubID & Underlying Symbol. Examples: MPID MPID + SubID MPID + MMID Underlying Symbol + MPID Underlying Symbol + MPID + MMID Underlying Symbol + MPID + SubID
7	Underlying Symbol	Underlying Symbol on the Risk Entity.	Varchar (8)	
8	Risk Entity - MPID	This is the MPID on the Risk Entity	Varchar(6)	
9	Risk Entity - MMID	This is the MMID on the Risk Entity	Varchar(6)	
10	Risk Entity - Risk SubID	This is the Risk SubID on the Risk Entity. (if applicable)	Varchar(8)	

#	Field Name	Field Description	Data Format	Valid Value
11	Risk Entity - Floor Broker Firm	This is the CRD of the floor-broker firm.	Varchar(12)	Not applicable for Options
12	Clearing Number	This is the clearing number associated with this MPID.	Varchar(4)	

Reference Data Event [RREF]

The RREF record logs start of day reference data as well as any updates made to risk settings intraday.

This event is applicable to all output types (Entering Firm, Market Making firm and Clearing firm).

#	Field Name	Description	Data Format	Valid Values
1	Event Type	Record Identifier	Varchar (10)	RREF: Pre-Trade Risk Reference Data
2	Message Sequence #	Unique Message Sequence number for the Symbol used for sorting/sequencing.	Number (20)	
3	Source Exchange	Market Code - Identifies the exchange of the event.	Varchar (10)	ARCO =ARCA Options AMXO = AMEX Options
4	Trade Date	Trade Date of the event.	Number (10)	YYYYMMDD
5	Event Timestamp	This is the timestamp of the reference data update. At the start of day this is when the configs are loaded to the matching engine. For intra-day updates, this is the timestamp when matching engine has successfully pulled in the user updates.	Timestamp	This is the timestamp in Nano-seconds: YYYY-MM-DD hh:mm:ss.nnnnnnnnn

#	Field Name	Description	Data Format	Valid Values
6	Risk Entity	Risk Entity which has exceeded the threshold or breach limit.	Varchar(40)	The Risk Entity is setup by the Risk user and can be from a combination of MPID, MMID, SubID & Underlying Symbol. Examples: MPID MPID + SubID MPID + MMID Underlying Symbol + MPID Underlying Symbol + MPID + MMID Underlying Symbol + MPID + SubID
7	Underlying Symbol	Underlying Symbol on the Risk Entity.	Varchar (8)	
8	Risk Entity - MPID	This is the MPID on the Risk Entity.	Varchar (6)	
9	Risk Entity - MMID	This is the MMID on the Risk Entity.	Varchar(6)	
10	Risk Entity - Risk SubID	This is the Risk SubID on the Risk Entity (if applicable).	Varchar (8)	
11	Risk Entity - Floor Broker Firm	This is the CRD of the floor-broker firm.	Varchar (12)	Not applicable for Options.
12	Clearing Number	This is the clearing number associated with this MPID.	Varchar (4)	
13	Risk Entity User/ Owner	Owner (CRD) of the risk limits on the risk entity that has resulted in the threshold/breach.	Number(10)	
14	User Type/Role	Identifies the user type associated with the Risk User- Owner	Varchar(1)	E - Entering firm C - Clearing firm F - Floor broker firm O - Options MM Firm

#	Field Name	Description	Data Format	Valid Values
15	Risk Control Type	Risk Type configured by the Risk User.	Number(2)	0 = Not Applicable
				1 = Single Order Max Qty
				2 = Single Order Max Notional Value
				6 = Maximum Duplicative Orders
				8 = Activity-based – Rolling Transaction
				9 = Activity-based – Rolling Volume
				10 = Activity-based – Rolling Percentage
				11 = Activity-based – Global Risk Mitigation Protection for Transaction/Volume/Percentage
				12 = Reject ISO
				13 = Reject Market Orders (except MOO & MOC)
				14 = Reject MOO & MOC
				19 = Reject Restricted Symbol
				26 = Limit Order Price Protection Options - Single Leg Custom Limits
				27 = Limit Order Price Protection Options - Complex Custom Limits
				For Future use:
				3 - Gross Credit: Executed Only
				4 - Gross Credit: Open Only

#	Field Name	Description	Data Format	Valid Values
16	Breach Action	Breach action type against which the risk controls are setup	Number(1)	1 - Notifications Only 2 - Cancel Non-Auction orders and Block Risk Entity 3 - Block Risk Entity
17	Risk Limit (High)	Risk Limit configured for this risk entity, risk type and breach action.	Number (22,2)	'-1' - Intra-day removals of credit controls or default limits if not previously set are defaulted to this value. De-activations of the MPID (Risk entity) will retain the limits for the rest of the day.
18	Risk Limit (Low)	Reserved for future use.	Number (22,0)	
19	Notify All	Notification for All Risk Controls.	Varchar(1)	N = receive notifications for the Risk Entity based on the Risk User's own configured risk controls only Y = receive notifications for the Risk Entity based on ALL risk controls configured for the Risk Entity, across all Risk Users
20	Reinstate All	Reinstatement Approval for All Risk Controls.	Varchar(1)	N = require the Risk User's reinstatement approval for the Risk Entity following breach of the Risk User's own configured risk controls only Y = require the Risk User's reinstatement approval for the Risk Entity following breach of ANY risk controls configured for the Risk Entity, across all Risk Users
21	Reinstate Auto	Reserved for Future use.	Varchar(1)	Always populated with "N".

#	Field Name	Description	Data Format	Valid Values
22	View All	View All Risk Controls - part of consent to clearing firm.	Varchar(1)	N = ability to view the Risk User's own configured risk controls for the Risk Entity, only Y = ability to view ALL risk controls configured for the Risk Entity, across ALL Risk Users
23	Permission	Permission to Set Risk Controls - part of consent to clearing firm, drives UI entitlements only.	Varchar(1)	N = Risk User may NOT configure their own risk controls for the Risk Entity Y = Risk User may configure their own risk controls for the Risk Entity
24	Email	This is the email-id setup for pre-trade Risk activity notification.	Varchar(200)	
25	Risk Source Update	Identifies the update is sources from TOP or via the Risk API.	Varchar(5)	TOP API NONE (applicable to start of day ref data messages only)
26	IOC Attribution	controls whether IOC and FOK orders will be included/excluded from calculations	Number(1)	1 = include IOCs in activity-based calculations 2 = exclude IOCs from activity-based calculations. 0 = Not applicable
27	Time Window	Global Risk Mitigation Protection window for GRMP risk controls. The Duplicative order time window applicable for Max. Duplicative orders will also be available on this field.	Number(22,0)	As configured by the customer.

#	Field Name	Description	Data Format	Valid Values
28	RiskRangeID	Quantity or price range to which the risk limit is applied	Number (2)	Valid Values: 0-10 1 = Below or Equal to $1.00 2 = Above $1.00 and Below or Equal to $2.00 3 = Above $2.00 and Below or Equal to $3.00 4 = Above $3.00 and Below or Equal to $5.00 5 = Above $5.00 and Below or Equal to $7.50 6 = Above $7.50 and Below or Equal to $10.00 7 = Above $10.00 and Below or Equal to $20.00 8 = Above $20.00 and Below or Equal to $50.00 9 = Above $50.00 and Below or Equal to $100.00 10 = Above $100.00 <blank>: Activation of Limit order price protection risk controls after price limits have been accepted. For all other RiskControlTypes: Not applicable and should be set to 0 and will be ignored if populated with any other value.
29	Percentage Risk Limit (High)	Percentage limits setup for risk limits such as: - Limit Order Price Protection	Number (10)	Format: Number (10,0)
30	Percentage Risk Limit (Low)	Reserved for future use	Number (10)	Format: Number (10,0)

#	Field Name	Description	Data Format	Valid Values
31	Risk Activation Flag	Indicates risk control activation status	Varchar (1)	N = Risk Control turned off Y = Risk Control turned on
32	Multiplier	Client configurable Multipliers across RiskRangeIDs on applicable risk checks. (Currently, not applicable to Options)	Number (2)	Valid Values: 0-10 Early/Late trading: min=1 and max=2 Closing: min=1 and max=10

Appendix

Appendix A: Available Options Output Summary

#	Output	Available Markets	Available Subscriptions	Contents
1	NYSE Options Execution Report Output	NYSE Arca Options NYSE American Options	Outputs will be made available for one or more MPID's for Entering Firms, one or more clearing numbers for Clearing Firms, by Broker Firm MPID or by MMID for Market Making Firms.	This execution report output summarizes all report allocations, including reversals and corrections, executed at the NYSE or at an away market. Any corrected trades performed on a T+N basis will be included for the trading day in which the correction occurred.
2	NYSE Options GTC Order Report Output	NYSE Arca Options NYSE American Options	Outputs will be made available for one or more MPID's for Entering Firms only.	This order output includes all GTC orders at the end of the day that will carry over to the next day trading. This file will not include GTC orders expiring on account of Series expiration at the end of the trading day. Note: This file is produced before the nightly corporate action process and therefore may include GTC orders that are set to be canceled overnight on account of a corporate action.
3	NYSE Options Risk Report Output	NYSE Arca Options NYSE American Options	Outputs will be made available for one or more MPID's for Entering Firms, one or more clearing numbers for Clearing Firms, or by MMID for Market Making Firms.	This output includes information on risk controls including firm defined pre-set risk thresholds, breaches and any associated actions taken to resolve such as blocking of new orders, or order cancelations.
4	NYSE Options Gateway Metric Report	NYSE Arca Options NYSE American Options	Outputs will be made available for Entering Firms at Firm CRD level only.	This output summarizes daily Options Gateway performance at end of day.

#	Output	Available Markets	Available Subscriptions	Contents
5	NYSE Options Unified Market Maker Report	NYSE Arca Options NYSE American Options	Outputs will be made available for either a single MMID or Market Maker Firm CRD level.	This output provides Market Makers with a daily, month to date or quarterly view (NYSE American Options only) of Market Maker performance. As part of this output, Market Makers may also subscribe to a daily list of all active symbols currently subscribed to as a Market Maker.
6	ARCA Options Customer Posting Tier Report	NYSE Arca Options	Outputs will be made available for Entering Firms at Firm CRD level only.	This output provides a daily summary of month to date customer volumes in order for a Firm to track/measure how they are performing in order to meet the customer billing tiering programs.
7	Arca Options Market Maker Posting Tier Report	NYSE Arca Options	Outputs will be made available for Market Maker level at Firm CRD level only.	This output provides a daily summary of month-to-date Market Maker eligible volumes against Market Maker thresholds for achieving monthly tiers for posting credits and take discounts.
8	Arca Options Customer CAP Report	NYSE Arca Options	Outputs will be made available for Entering Firms at Firm CRD level only.	This output is generated daily and provides customers with month to date information on how a Firm is tracking towards their cap per month on combined Firm Proprietary Fees and Broker Dealer Fees.
9	NYSE Options Firm Executive Volume Summary Report	NYSE Arca Options NYSE American Options	Outputs will be made available for at Firm CRD level only.	This output is produced monthly, on the first business day of the month, and provides a volume summary over a rolling 13-month time window. Customers have 3 different summary reports that can be subscribed to with varying levels of summary data.
10	NYSE Options Market Maker Rank Report	NYSE Arca Options NYSE American Options	Outputs will be made available for at MM Firm CRD level only.	This output is generated daily and provides month to date (ARCA) or quarter to date (AMEX) information and allows MM Firm to evaluate their performance against their peers by Symbol daily.
11	AMEX Options Customer Posting Tier Report	NYSE American Options	Outputs will be made available for Firms at Firm CRD level only.	This output provides a daily summary of month to date customer volumes in order for a Firm to track/measure how they are performing in order to meet the customer billing tiering programs.

#	Output	Available Markets	Available Subscriptions	Contents
12	AMEX Options Market Maker Posting Tier Report (Sliding Scale)	NYSE American Options	Outputs will be made available for Market Maker level at Firm CRD level only.	This output provides a daily summary of month-to-date Market Maker eligible volumes against Market Maker thresholds for achieving monthly tiers Sliding Scale program.
13	AMEX Options Customer CAP Report	NYSE American Options	Outputs will be made available for Firms at Firm CRD level only.	This output is generated daily and provides customers with month to date information on how a Firm is tracking towards their cap per month on combined Firm Proprietary Fees and Broker Dealer Fees.
14	NYSE American Options MTD CUBE Volume Summary Report	NYSE American Options	Outputs will be made available for any firm and provides exchange wide stats.	This output is generated daily and provides daily and month to date exchange wide CUBE order stats and volumes at the Underlying Symbol level.
15	NYSE Options Electronic and Outcry Volume Report	NYSE Arca Options NYSE American Options	Outputs will be made available for any firm and provides exchange wide stats.	This output is generated daily and provides daily and month to date exchange wide electronic and outcry trade stats and volumes at the Underlying Symbol level.
16	NYSE Options Complex Volume Summary Report	NYSE Arca Options NYSE American Options	Outputs will be made available for any firm and provides exchange wide stats.	This output is generated daily and provides daily exchange wide Complex volumes, Orders and Series stats at the Underlying Symbol level.
17	NYSE Start of day Session Config Output.	NYSE Arca Options NYSE American Options	Outputs will be made available at Firm CRD level only.	This output is generated daily at start of day and provides the session level preferences configured by customers for their sessions.

Appendix B: Document Version History

Date	Version Number	Change Summary
06/14/23	2.0	Updated IRS in support of Risk Phase-3.
5/23/22	1.2	1.Removed GRMP Threshold column from RREF event 2. Update Risk Type value in RTB and RREF events 3. Add "Underlying Symbol" Column across the 4 risk events: RTB (Thresholds and Breaches), RMAN (Kill Switch), RRI (Reinstatements) and RREF (Ref-data) events.

Date	Version Number	Change Summary
4/11/2022	1.1	Update Breach Action fields value in RTB and RREF Add New fields in RREF Events 1. IOC Attribution 2. GRMP Time Window 3. GRMP Threshold column In RMAN event CRD will be 0 0 when action is performed by superuser
10/15/2021	1.0	Initial publication