NSE Historical Data
Order and Trade Specification

Version: 1.17
Date: 08 December 2025

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Revision History

Name	Description	Date
Version 1.0	Technical specification document issued for Capital Market and Futures & Options	24 December 2007
Version 1.1	Currency Derivatives segment added	24 August 2008
Version 1.2	Change in trade size of trade number in FAO segment.	07 September 2020
Version 1.3	Split file nomenclature for FAO segment added	02 November 2020
Version 1.4	Trigger file details for all segments added	26 November 2020
Version 1.5	Addition of two new streams for FAO Trades and Orders files each (Increased from 6 to 8)	08 March 2021
Version 1.6	Addition of two new streams for FAO Trades and Orders files each (Increased from 8 to 10)	11 October 2021
Version 1.7	Addition of Limit Price Indicator flag in Orders files for FAO and CD Segment	16 December 2021
Version 1.8	Addition of two new streams for FAO Trades and Orders files each (Increased from 10 to 12)	24 January 2022
Version 1.9	Addition of three new streams for FAO Trades and Orders files each (Increased from 12 to 15)	11 April 2022
Version 1.10	1. Addition of one new stream for FAO Trades and Orders files each (Increased from 15 to 16) 2. FAQ section added	05 September 2022
Version 1.11	1. Commodity Derivatives segment 2. Revision in remarks column for Limit Price Indicator in FAO Order 3. Revision in remarks column for Limit Price Indicator in CD Order. Limit Price Indicator interpretation explanation added in FAQ section	15 December 2023
Version 1.12	1. Addition of two new streams for FAO Trades and Orders files each (Increased from 16 to 18)	08 April 2024
Version 1.13	Trade numbers changed from 16 to 17 digit in CM Trades	01 July 2024

Version 1.14	1. Split file nomenclature for CM segment added 2. "Volume Disclosed" and "Volume Original" fields length increased from 8 to 10 digits in CM Orders 3. "Trade Quantity" field length increased from 8 to 10 digits in CM Trades 4. Addition of Section 6. Jiffy Time Conversion 5. FAQ updated	16 June 2025
Version 1.15	1. Addition of Section 7. Important Notes 2. Addition of Section 8. About SFTP (Secure File Transfer Protocol) 3. Added 2 questions in general FAQs section 4. Added 1 question in Historical Data Download	15 September 2025
Version 1.16	1. Modified the "Valid Range of Values" column for the "Limit Price Indicator" field for FAO segment in section 2.1 and for CD segment in section 3.1 2. "Strike Price", "Limit Price" and "Trigger Size" fields length increased from 8 to 10 digits in Orders file for Commodity segment 3. "Strike Price" and "Trade Price" fields length increased from 8 to 10 digits in Trades for Commodity segment 4. Added 1 question in FAQ section 9.5 5. In Section 7.1, the increase of byte size of Order and Trade file for commodity segment has been added	01 November 2025
Version 1.17	1. Addition of market status Pre-Open 'PO' in Record Indicator of FAO Order Data 2. Addition of market status Pre-Open 'PO' in Record Indicator of FAO Trade Data 3. Addition of Section 9. Annexure	08 December 2025

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1. Cash Market (CM)/ Equity

1.1 Cash Market/ Equity Orders Data

Message Layout						
Name	Cash Market/ Equity Orders Data					
Frequency	All order ticks					
Record length	Fixed					
Record Delimiter	LF					
Field No	**Name of the Field**	**Field Description**	**Type**	**Length (No of Bytes)**	**Valid Range of Values**	**Other Comments**
1	Record Indicator	Pre-Open or Regular Market	Alphabetic	2	'PO', 'RM'	'PO'=Pre-Open 'RM'=Regular Market
2	Segment	Segment	Alphabetic	4	'CASH'	
3	Order Number	Order Number	Numeric	16		
4	Transaction Time (Jiffies)	Time when transaction occurred	Numeric	14		65536 Jiffies = 1sec Jiffies are counted from 1 Jan 1980 midnight
5	Buy / Sell Indicator	Order Type	Alphabetic	1	'B', 'S'	'B' = Buy 'S' = Sell
6	Activity Type	Transaction Type	Numeric	1	1,3,4	1 - Order Entry 3 - Order Cancel 4 - Order Mod
7	Symbol	Security Symbol	Alphabetic	10		The values in this field will be padded with leading **b**'s when < 10 chars. E.g. Symbol ABC will be "bbbbbbbABC"
8	Series	Series	Alphanumeric	2		Different series such as EQ, BE, BL, DR etc.
9	Volume Disclosed	Disclosed Quantity	Numeric	10	Non-Negative	The value in this filed is 0 for non-DQ orders and it will be padded with leading zeros when < 10 places.

						E.g. 1234 will be "0000001234"
10	Volume Original	Order Quantity	Numeric	10	Non-Zero, Non-Negative	The value in this filed be padded with leading zeros when < 10 places. E.g. 1234 will be "0000001234"
11	Limit Price	Order Price	Numeric	8	Non-Zero, Non-Negative	The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. The value in this field will be padded with leading zeros when < 8 places. E.g. 123.45 will be "00012345"
12	Trigger Price	Price at which Stop Loss order is to be triggered	Numeric	8	Non-Zero, Non-Negative	The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. The value in this field is 0 for Non-Stop Loss orders. The value in this field will be padded with leading zeros when < 8 places. E.g. 123.45 will be "00012345"
13	Market Order Flag	Market/ Limit Order Indicator	Alphabetic	1	'Y','N'	'Y' = Market Order 'N' = Limit Order
14	Stop Loss Flag	Stop Loss Indicator	Alphabetic	1	'Y','N'	'Y' = Stop Loss Order 'N' = Regular Lot Order
15	IO Flag	IOC Indicator	Alphabetic	1	'Y','N'	'Y' = Immediate or Cancel 'N' = Non IOC

16	Algo Indicator	Flag indicating source of Terminal generating Order	Numeric	1	0 1 2 3	0 - Algo 1 - Non-Algo 2 - Algo through SOR 3 - Non-Algo through SOR
17	Client Identity Flag	Flag indicating beneficiary	Numeric	1	1,2,3	1 - Custodian 2 - Proprietary 3 - Client
Total Length				**91**		

1.2 Cash Market/ Equity Trade Data

Message Layout						
Name	Cash Market/ Equity Trade Data					
Frequency	All trade ticks					
Record length	Fixed					
Record Delimiter	LF					
Field No	**Name of the Field**	**Field Description**	**Type**	**Length (No of Bytes)**	**Valid Range of Values**	**Other Comments**
1	Record Indicator	Pre-Open or Regular Market	Alphabetic	2	'PO', 'RM'	'PO'=Pre-Open 'RM' = Regular Market
2	Segment	Segment	Alphabetic	4	'CASH'	
3	Trade Number	Transaction Number	Numeric	17		
4	Trade Time (Jiffies)	Time when transaction occurred	Numeric	14		65536 Jiffies = 1sec. Jiffies are counted from 1 Jan 1980 midnight
5	Symbol	Security Symbol	Alphabetic	10		The values in this field will be padded with leading **b**'s when < 10 chars. E.g. Symbol ABC will be "bbbbbbbABC"
6	Series	Series	Alphanumeric	2		Different series such as EQ, BE, BL, DR etc.
7	Trade Price	Transaction Price	Numeric	8	Non-Zero, Non-Negative	The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. The value in this field will be padded with leading zeros when < 8 places. E.g. 123.45 will be "00012345"

8	Trade Quantity	Transaction Quantity	Numeric	10	Non-Zero, Non-Negative	The value in this field will be padded with leading zeros when < 10 places. E.g. 1234 will be "0000001234"
9	Buy Order Number	Buy Order Number of Transaction	Numeric	16		
10	Buy Algo Indicator	Flag indicating source of Buy Terminal	Numeric	1	0, 1, 2, 3	0 - Algo 1 - Non-Algo 2 - Algo through SOR 3 - Non-Algo through SOR
11	Buy Client Identity Flag	Flag indicating Buy Side beneficiary	Numeric	1	1,2,3	1 - Custodian 2 - Proprietary 3 - Client
12	Sell Order Number	Sell Order Number of Transaction	Numeric	16		
13	Sell Algo Indicator	Flag indicating source of Sell Terminal	Numeric	1	0, 1, 2, 3	0 - Algo 1 - Non-Algo 2 - Algo through SOR 3 - Non-Algo through SOR
14	Sell Client Identity Flag	Flag indicating Sell Side beneficiary	Numeric	1	1,2,3	1 - Custodian 2 - Proprietary 3 - Client
Total Length				**103**		

NOTE: To reduce the download time of the single file, the existing single file of Order and Trade files have been split into multiple files, and their nomenclature are given below:

Orders Files	Trade Files:
1. CM_Orders_DDMMYYYY_01.DAT.gz 2. CM_Orders_DDMMYYYY_02.DAT.gz . . N. CM_Orders_DDMMYYYY_NN.DAT.gz N* ---Number of streams in sequential order	1. CM_Trades_DDMMYYYY_01.DAT.gz 2. CM_Trades_DDMMYYYY_02.DAT.gz . . N. CM_Trades_DDMMYYYY_NN.DAT.gz N* ---Number of streams in sequential order

Note: Number of streams may increase in the future.

1.3 Index Data

Message Layout						
Name	Index Data					
Frequency	All ticks					
Record length	Fixed					
Record Delimiter	LF					
Field No	**Name of the Field**	**Field Description**	**Type**	**Length (No of Bytes)**	**Valid Range of Values**	**Other Comments**
1	Record Indicator	Record Indicator	Alphabetic	2	'IX'	
2	Segment	Segment	Alphabetic	4	'CASH'	
3	Date of Transaction	Date when Index was computed	Numeric	8		YYYYMMDD
4	Transaction Time	Time when transaction occurred	Alphanumeric	8		Transaction time is in HH:MM:SS format
5	Value of Nifty 50 Index	Value of Nifty 50 Index	Numeric	8		The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. The value in this field will be padded with leading zeros when < 8 places. E.g. 5245.05 will be "00524505"
6	Value of Nifty Next 50	Value of Nifty Next 50 Index	Numeric	8		The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. The value in this field will be padded with leading zeros when < 8 places. E.g. 10013.55 will be "01001355"
Total Length				**38**		

2. Futures & Options (FO)/ Equity Derivatives (ED)

2.1 Futures & Options (FAO)/ Equity Derivatives Order Data

Message Layout						
Name	Futures & Options/ Equity Derivatives Market Orders Data					
Frequency	All order ticks					
Record length	Fixed					
Record Delimiter	LF					
Field No	**Name of the Field**	**Field Description**	**Type**	**Length No of Bytes**	**Valid Range of Values**	**Other Comments**
1	Record Indicator	Pre-Open or Regular Market Order	Alphabetic	2	'PO' 'RM'	'PO' = Pre-Open 'RM' = Regular Market Order
2	Segment	Segment	Alphabetic	4	'FAOb'	Equity Derivatives
3	Order Number	Order Number	Numeric	16		
4	Transaction Time (Jiffies)	Time when transaction occurred	Numeric	14		65536 Jiffies=1sec. Jiffies are counted from 1 Jan 1980 midnight
5	Buy / Sell Indicator	Order Type	Alphabetic	1	'B','S'	'B' = Buy 'S' = Sell
6	Activity Type	Transaction Type	Numeric	1	1, 3, 4	1 - Order Entry 3 - Order Cancel 4 - Order Mod
7	Symbol	Underlying Symbol	Alphabetic	10		The values in this field will be padded with leading **b**'s when < 10 chars. E.g. Symbol ABC will be "bbbbbbbABC"
8	Instrument	Derivative Instrument Type	Alphabetic	6	'FUTIDX' 'OPTIDX' 'FUTSTK' 'OPTSTK'	'FUTIDX' = Index Futures 'OPTIDX' = Index Options 'FUTSTK' = Stock Futures 'OPTSTK' = Stock Options

9	Expiry Date	Expiry Date of Derivative Contract	Alphanumeric	9		This field is of the format DDMMMYYYY e.g. "28JUN2012"
10	Strike Price	Strike Price of Underlying for Option contract	Numeric	8	Non-Negative	The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. It will be 0 for Future Contracts and will be padded with leading zeros when < 8 places. E.g. 101.50 will be "00010150"
11	Option Type	Option Type of Derivative Contract	Alphabetic	2	'CA' 'PA' 'CE' 'PE' 'FF'	'CA' = Call American 'PA' = Put American 'CE' = Call European 'PE' = Put European 'FF' = Futures Contract
12	Volume Disclosed	Disclosed Quantity	Numeric	8	Non-Negative	The value in this field is 0 for Non-DQ orders and it will be padded with leading zeros when < 8 places, This represents no of shares for both options and futures. It does not represent No of Contracts E.g. 1234 will be "00001234"
13	Volume Original	Order Quantity	Numeric	8	Non-Zero, Non-Negative	The value in this filed be padded with leading zeros when < 8 places. This represents no of shares for both options and futures. It does not represent No of Contracts E.g. 1234 will be "00001234"

14	Limit Price	Order Price	Numeric	8	Non-Negative	The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. For spread orders, it is the spread value between 2 contracts' LTP and can therefore be 0. It will be padded with leading zeros when < 8 places. E.g. 123.45 will be "00012345".
15	Trigger Price	Price at which Stop Loss order is to be triggered	Numeric	8	Non-Zero, Non-Negative	The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. The value in this field is 0 for Non-Stop Loss orders. The value in this field will be padded with leading zeros when < 8 places. E.g. 123.45 will be "00012345"
16	MKT Flag	Market/Limit Order Indicator	Alphabetic	1	'Y','N'	'Y' = Market Order 'N' = Limit Order
17	On Stop Flag	Stop Loss Indicator	Alphabetic	1	'Y','N'	'Y' = Stop Loss Order 'N' = Regular Lot Order
18	IO Flag	IOC Indicator	Alphabetic	1	'Y','N'	'Y' = Immediate or Cancel 'N' = Non IOC
19	Spread / Combination Type	Spread/ Combinational Order Indicator	Alphabetic	1	'S', '2', '3', '*'	'S' = Spread Order '2' = 2 Leg Order '3' = 3 Leg Order '*' = Non-Spread Order

20	Algo Indicator	Flag indicating source of Terminal generating Order	Numeric	1	0, 1, 2, 3	0 - Algo 1 - Non-Algo 2 - Algo through SOR 3 - Non-Algo through SOR
21	Client Identity Flag	Flag indicating beneficiary	Numeric	1	1,2,3	1 - Custodian 2 - Proprietary 3 - Client
22	Limit Price Indicator	Flag to indicate positive/ negative limit price	Alphabetic	1	'Y', 'N'	'N' = Negative 'Y' = Positive
Total Length				**112**		

2.2 Futures & Options (FAO)/ Equity Derivatives Trade Data

Message Layout						
Name	Equity Derivatives Market Trade Data					
Frequency	All trade ticks					
Record length	Fixed					
Record Delimiter	LF					
Field No	**Name of the Field**	**Field Description**	**Type**	**Length No of Bytes**	**Valid Range of Values**	**Other Comments**
1	Record Indicator	Pre-Open or Regular Market Trade	Alphabetic	2	'PO' 'RM'	'PO' = Pre-Open 'RM' = Regular Market Trade
2	Segment	Segment	Alphabetic	4	'FAOb'	Equity Derivatives
3	Trade Number	Transaction Number	Numeric	17		
4	Trade Time (Jiffies)	Time when transaction occurred	Numeric	14		65536 Jiffies = 1sec. Jiffies are counted from 1 Jan 1980 midnight
5	Symbol	Underlying Symbol	Alphabetic	10		The values in this field will be padded with leading **b**'s when < 10 chars. E.g. Symbol ABC will be "bbbbbbbABC"
6	Instrument	Derivative Instrument Type	Alphabetic	6	'FUTIDX' 'OPTIDX' 'FUTSTK' 'OPTSTK'	'FUTIDX' = Index Futures 'OPTIDX' = Index Options 'FUTSTK' = Stock Futures 'OPTSTK' = Stock Options
7	Expiry Date	Expiry Date of Derivative Contract	Numeric	9		This field is of the format DDMMMYYYY e.g. "28JUN2012"

8	Strike Price	Strike Price of Option contract	Numeric	8	Non-Negative	The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. It will be 0 for Future Contracts and will be padded with leading zeros when < 8 places. E.g. 101.50 will be "00010150"
9	Option Type	Option Type of Derivative Contract	Alphabetic	2	'CA' 'PA' 'CE' 'PE' 'FF'	'CA' = Call American 'PA' = Put American 'CE' = Call European 'PE' = Put European 'FF' = Futures Contract
10	Trade Price	Transaction Price	Numeric	8	Non-Zero, Non-Negative	The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. The value in this field will be padded with leading zeros when < 8 places. E.g. 123.45 will be "00012345"
11	Trade Quantity	Transaction Quantity	Numeric	8	Non-Zero, Non-Negative	The value in this field will be padded with leading zeros when < 8 places. Represents no of shares. E.g. 1234 will be "00001234"
12	Buy Order Number	Buy Order Number of Transaction	Numeric	16		
13	Buy Algo Indicator	Flag indicating source of Buy Terminal	Numeric	1	0, 1, 2, 3	0 - Algo 1 - Non-Algo 2 - Algo through SOR 3 - Non-Algo through SOR
14	Buy Client Identity Flag	Flag indicating Buy Side beneficiary	Numeric	1	1,2,3	1 - Custodian 2 - Proprietary 3 - Client
15	Sell Order Number	Sell Order Number of Transaction	Numeric	16		

16	Sell Algo Indicator	Flag indicating source of Sell Terminal	Numeric	1	0, 1, 2, 3	0 - Algo 1 - Non-Algo 2 - Algo through SOR 3 - Non-Algo through SOR
17	Sell Client Identity Flag	Flag indicating Sell Side beneficiary	Numeric	1	1,2,3	1 - Custodian 2 - Proprietary 3 - Client
Total Length				**124**		

NOTE: To reduce the download time of the single file, the existing single file of Order and Trade files have been split into multiple files, and their nomenclature are given below:

Orders Files	Trade Files:
1.FAO_Orders_DDMMYYYY_01.DAT.gz 2. FAO_Orders_DDMMYYYY_02.DAT.gz . . 11. FAO_Orders_DDMMYYYY_11.DAT.gz . . N. FAO_Orders_DDMMYYYY_nn.DAT.gz n* ---Number of streams in sequential order	1. FAO_Trades_DDMMYYYY_01.DAT.gz 2. FAO_Trades_DDMMYYYY_02.DAT.gz . . 11. FAO_Trades_DDMMYYYY_11.DAT.gz . . N. FAO_Trades_DDMMYYYY_nn.DAT.gz n* ---Number of streams in sequential order

Note: The number of streams will increase sequentially over time.

- Please note that none of the contracts will be overlapping in the any of the files. The file size of each file will be different.

3. Currency Derivatives (CD)

3.1 Currency Derivatives Order Data

Message Layout						
Name	Currency Derivatives Market Orders Data					
Frequency	All order ticks					
Record length	Fixed					
Record Delimiter	LF					
Field No	**Name of the Field**	**Field Description**	**Type**	**Length No of Bytes**	**Valid Range of Values**	**Other Comments**
1	Record Indicator	Regular Market Order	Alphabetic	2	'RM'	Regular Market Order
2	Segment	Segment	Alphabetic	4	'CDSb'	Currency Derivatives
3	Order Number	Order Number	Numeric	16		
4	Transaction Time (Jiffies)	Time when transaction occurred	Numeric	14		65536 Jiffies = 1sec. Jiffies are counted from 1 Jan 1980 midnight
5	Buy / Sell Indicator	Order Type	Alphabetic	1	'B','S'	'B' = Buy 'S' = Sell
6	Activity Type	Transaction Type	Numeric	1	1, 3, 4	1 - Order Entry 3 - Order Cancel 4 - Order Mod
7	Symbol	Underlying Symbol	Alphabetic	10		The values in this field will be padded with leading **b**'s when < 10 chars. E.g. Symbol ABC will be "bbbbbbbABC"
8	Instrument	Derivative Instrument Type	Alphabetic	6	'FUTCUR' 'OPTCUR'	'FUTCUR' = Currency Futures 'OPTCUR' = Currency Options
9	Expiry Date	Expiry Date of Derivative Contract	Alphanumeric	9		This field is of the format DDMMMYYYY e.g. "28JUN2012"
10	Strike Price	Strike Price of Option contract	Numeric	8	Non-Negative	The value in this field will be in paise wherein the right most 4 digits will indicate values after decimal point. It will be 0 for Future Contracts and will be padded with leading zeros when < 8 places.

						E.g. 12.3456 will be "00123456"
11	Option Type	Option Type of Derivative Contract	Alphabetic	2	'CA' 'PA' 'CE' 'PE' 'FF'	'CA' = Call American 'PA' = Put American 'CE' = Call European 'PE' = Put European 'FF' = Futures Contract
12	Volume Disclosed	Disclosed Quantity (In Lots)	Numeric	8	Non-Negative	The value in this filed is 0 for Non-DQ orders and it will be padded with leading zeros when < 8 places. Represents no of Contracts. E.g. 1234 will be "00001234"
13	Volume Original	Order Quantity (In Lots)	Numeric	8	Non-Zero, Non-Negative	The value in this filed be padded with leading zeros when < 8 places. Represents no of Contracts. E.g. 1234 will be "00001234"
14	Limit Price	Order Price	Numeric	8	Non-Negative	The value in this field will be in paise wherein the right most 4 digits will indicate values after decimal point. For spread orders, it is the spread value between 2 contracts' LTP and can therefore be 0. It will be padded with leading zeros when < 8 places. E.g. 12.3456 will be "00123456".
15	Trigger Price	Price at which Stop Loss order is to be triggered	Numeric	8	Non-Zero, Non-Negative	The value in this field will be in paise wherein the right most 4 digits will indicate values after decimal point. The value in this field is 0 for Non-Stop Loss orders. The value in this field will be padded with leading zeros when < 8 places. E.g. 12.3456 will be "00123456"

16	MKT Flag	Market/Limit Order Indicator	Alphabetic	1	'Y','N'	'Y' = Market Order 'N' = Limit Order
17	On Stop Flag	Stop Loss Indicator	Alphabetic	1	'Y','N'	'Y' = Stop Loss Order 'N' = Regular Lot Order
18	FOK Flag	FOK/IOC Indicator	Alphabetic	1	'Y','N'	'Y' = Fill Or Kill / Immediate Or Cancel 'N' = Non IOC
19	Spread / Comb Type	Spread/ Combinational Order Indicator	Alphabetic	1	'S', '2', '3', '*'	'S' = Spread Order '2' = 2 Leg Order '3' = 3 Leg Order '*' = Non-Spread Order
20	Algo Indicator	Flag indicating source of Terminal generating Order	Numeric	1	0, 1, 2, 3	0 - Algo 1 - Non-Algo 2 - Algo through SOR 3 - Non-Algo through SOR
21	Client Identity Flag	Flag indicating beneficiary	Numeric	1	1,2,3	1 - Custodian 2 - Proprietary 3 - Client
22	Limit Price Indicator	Flag to indicate positive and negative limit price	Alphabetic	1	'Y', 'N'	'N' = Negative 'Y' = Positive
Total Length				**112**		

3.2 Currency Derivatives Trade Data

Message Layout						
Name	Currency Derivatives Market Trades Data (Research Data)					
Frequency	All trade ticks					
Record length	Fixed					
Record Delimiter	LF					
Field No	**Name of the Field**	**Field Description**	**Type**	**Length No of Bytes**	**Valid Range of Values**	**Other Comments**
1	Record Indicator	Regular Market Trade	Alphabetic	2	'RM'	Regular Market Trade
2	Segment	Segment	Alphabetic	4	'CDSb'	Currency Derivatives
3	Trade Number	Transaction Number	Numeric	16		
4	Trade Time (Jiffies)	Time when transaction occurred	Numeric	14		65536 Jiffies = 1sec. Jiffies are counted from 1 Jan 1980 midnight
5	Symbol	Underlying Symbol	Alphabetic	10		The values in this field will be padded with leading **b**'s when < 10 chars. E.g. Symbol ABC will be "bbbbbbbABC"
6	Instrument	Derivative Instrument Type	Alphabetic	6	'FUTCUR' 'OPTCUR'	'FUTCUR' = Currency Futures 'OPTCUR' = Currency Options
7	Expiry Date	Expiry Date of Derivative Contract	Alphanumeric	9		This field is of the format DDMMMYYYY e.g. "28JUN2012"

8	Strike Price	Strike Price of Option contract	Numeric	8	Non-Negative	The value in this field will be in paise wherein the right most 4 digits will indicate values after decimal point. It will be 0 for Future Contracts and will be padded with leading zeros when < 8 places. E.g. 12.3456 will be "00123456"
9	Option Type	Option Type of Derivative Contract	Alphabetic	2	'CA' 'PA' 'CE' 'PE' 'FF'	'CA' = Call American 'PA' = Put American 'CE' = Call European 'PE' = Put European 'FF' = Futures Contract
10	Trade Price	Transaction Price	Numeric	8	Non-Zero, Non-Negative	The value in this field will be in paise wherein the right most 4 digits will indicate values after decimal point. The value in this field will be padded with leading zeros when < 8 places. E.g. 12.3456 will be "00123456"
11	Trade Quantity	Transaction Quantity (In Lots)	Numeric	8	Non-Zero, Non-Negative	The value in this field will be padded with leading zeros when < 8 places,. E.g. 1234 will be "00001234"
12	Buy Order Number	Buy Order Number of Transaction	Numeric	16		
13	Buy Algo Indicator	Flag indicating source of Buy Terminal	Numeric	1	0, 1, 2, 3	0 - Algo 1 - Non-Algo 2 - Algo through SOR 3 - Non-Algo through SOR
14	Buy Client Identity Flag	Flag indicating Buy Side beneficiary	Numeric	1	1,2,3	1 - Custodian 2 - Proprietary 3 - Client
15	Sell Order Number	Sell Order Number of Transaction	Numeric	16		

16	Sell Algo Indicator	Flag indicating source of Sell Terminal	Numeric	1	0, 1, 2, 3	0 - Algo 1 - Non-Algo 2 - Algo through SOR 3 - Non-Algo through SOR
17	Sell Client Identity Flag	Flag indicating Sell Side beneficiary	Numeric	1	1,2,3	1 - Custodian 2 - Proprietary 3 - Client
Total Length				**123**		

4. Commodity Derivatives (COM)

4.1 Commodity Derivatives Order Data

Message Layout						
Name	Commodity Derivatives Market Orders Data (Research Data)					
Frequency	All order ticks					
Record length	Fixed					
Record Delimiter	LF					
Field No	**Name of the Field**	**Field Description**	**Type**	**Length (No of Bytes)**	**Valid Range of Values**	**Other Comments**
1	Record Indicator	Regular Market Order	Alphabetic	2	'RM'	Regular Market Order
2	Segment	Segment	Alphabetic	4	'COMb'	Commodity Derivatives
3	Order Number	Order Number	Numeric	16		
4	Transaction Time (Jiffies)	Time when transaction occurred	Numeric	14		65536 Jiffies = 1sec. Jiffies are counted from 1 Jan 1980 midnight
5	Buy / Sell Indicator	Order Type	Alphabetic	1	'B','S'	'B' = Buy 'S' = Sell
6	Activity Type	Transaction Type	Numeric	1	1, 3, 4	1 - Order Entry 3 - Order Cancel 4 - Order Mod
7	Symbol	Underlying Symbol	Alphabetic	10		The values in this field will be padded with leading **b**'s when < 10 chars. E.g. Symbol ABC will be "bbbbbbbABC"
8	Instrument	Instrument Type	Alphabetic	6	'FUTBLN' 'FUTENR' 'FUTAGR' 'FUTBAS' 'OPTBLN' 'OPTBAS'	'FUTBLN' = Future Bullion 'FUTENR' = Future Energy 'FUTAGR' = Future Agri 'FUTBAS' = Future Base Metal 'OPTBLN' = Options Base Metal 'OPTBAS' = Options Bullion
9	Expiry Date	Expiry Date of a Contract	Alphanumeric	9		This field is of the format DDMMMYYYY e.g. "05Dec2018"

10	Strike Price	Strike Price of Option contract	Numeric	10	Non-Negative	The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. It will be 0 for Future Contracts and will be padded with leading zeros when < 10 places. E.g. 12.34 will be "0000001234"
11	Option Type	Option Type of Derivative Contract	Alphabetic	2	'CA' 'PA' 'CE' 'PE' 'FF'	'CA' = Call American 'PA' = Put American 'CE' = Call European 'PE' = Put European 'FF' = Futures Contract
12	Volume Disclosed	Disclosed Quantity (In Lots)	Numeric	8	Non-Negative	The value in this filed is 0 for Non-DQ orders and it will be padded with leading zeros when < 8 places. Represents no of Contracts. E.g. 1234 will be "00001234"
13	Volume Original	Order Quantity (In Lots)	Numeric	8	Non-Zero, Non-Negative	The value in this filed be padded with leading zeros when < 8 places. Represents no of Contracts. E.g. 1234 will be "00001234"
14	Limit Price	Order Price	Numeric	10	Non-Negative	The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. For spread orders, it is the spread value between 2 contracts' LTP and can therefore be 0. It will be padded with leading zeros when < 10 places. E.g. 12.34 will be "0000001234"

15	Trigger Price	Price at which Stop Loss order is to be triggered	Numeric	10	Non-Zero, Non-Negative	The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. The value in this field is 0 for Non-Stop Loss orders. The value in this field will be padded with leading zeros when < 10 places. E.g. 12.34 will be "0000001234"
16	MKT Flag	Market/ Limit Order Indicator	Alphabetic	1	'Y','N'	'Y' = Market Order 'N' = Limit Order
17	On Stop Flag	Stop Loss Indicator	Alphabetic	1	'Y','N'	'Y' = Stop Loss Order 'N' = Regular Lot Order
18	FOK Flag	FOK/ IOC Indicator	Alphabetic	1	'Y','N'	'Y' = Fill or Kill / Immediate Or Cancel 'N' = Non IOC
19	Spread / Comb Type	Spread/Combi national Order Indicator	Alphabetic	1	'S', '2', '3', '*'	'S' = Spread Order '2' = 2 Leg Order '3' = 3 Leg Order '*' = Non-Spread Order
20	Algo Indicator	Flag indicating source of Terminal generating Order	Numeric	1	0, 1, 2, 3	0 - Algo 1 - Non-Algo 2 - Algo through SOR 3 - Non-Algo through SOR
21	Client Identity Flag	Flag indicating beneficiary	Numeric	1	1,2,3	1 - Custodian 2 - Proprietary 3 - Client
Total Length				**117**		

4.2 Commodity Derivatives Trade Data

Message Layout						
Name	Commodity Derivatives Trades Data					
Frequency	All trade ticks					
Record length	Fixed					
Record Delimiter	LF					
Field No	**Name of the Field**	**Field Description**	**Type**	**Length (No of Bytes)**	**Valid Range of Values**	**Other Comments**
1	Record Indicator	Regular Market Trade	Alphabetic	2	'RM'	Regular Market Trade
2	Segment	Segment	Alphabetic	4	'COMb'	Commodity Derivatives
3	Trade Number	Transaction Number	Numeric	16		
4	Trade Time (Jiffies)	Time when transaction occurred	Numeric	14		65536 Jiffies = 1sec. Jiffies are counted from 1 Jan 1980 midnight
5	Symbol	Underlying Symbol	Alphabetic	10		The values in this field will be padded with leading **b**'s when < 10 chars. E.g. Symbol ABC will be "bbbbbbbABC"
6	Instrument	Derivative Instrument Type	Alphabetic	6	'FUTBLN' 'FUTENR' 'FUTAGR' 'FUTBAS' 'OPTBLN' 'OPTBAS'	'FUTBLN' = Future Bullion 'FUTENR' = Future Energy 'FUTAGR' = Future Agri 'FUTBAS' = Future Base Metal 'OPTBLN' = Options Bullion 'OPTBAS' = Options Base Metal
7	Expiry Date	Expiry Date of Derivative Contract	Alphanumeric	9		This field is of the format DDMMMYYYY e.g. "05Dec2018"

8	Strike Price	Strike Price of Option contract	Numeric	10	Non-Negative	The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. It will be 0 for Future Contracts and will be padded with leading zeros when < 10 places. E.g. 12.34 will be "0000001234"
9	Option Type	Option Type of Derivative Contract	Alphabetic	2	'CA' 'PA' 'CE' 'PE' 'FF'	'CA' = Call American 'PA' = Put American 'CE' = Call European 'PE' = Put European 'FF' = Futures Contract
10	Trade Price	Transaction Price	Numeric	10	Non-Zero, Non-Negative	The value in this field will be in paise wherein the right most 2 digits will indicate values after decimal point. The value in this field will be padded with leading zeros when < 10 places. E.g. 12.34 will be "0000001234"
11	Trade Quantity	Transaction Quantity (In Lots)	Numeric	8	Non-Zero, Non-Negative	The value in this field will be padded with leading zeros when < 8 places,. E.g. 1234 will be "00001234"
12	Buy Order Number	Buy Order Number of Transaction	Numeric	16		
13	Buy Algo Indicator	Flag indicating source of Buy Terminal	Numeric	1	0, 1, 2, 3	0 - Algo 1 - Non-Algo 2 - Algo through SOR 3 - Non-Algo through SOR
14	Buy Client Identity Flag	Flag indicating Buy Side beneficiary	Numeric	1	1,2,3	1 - Custodian 2 - Proprietary 3 - Client

15	Sell Order Number	Sell Order Number of Transaction	Numeric	16		
16	Sell Algo Indicator	Flag indicating source of Sell Terminal	Numeric	1	0,1, 2, 3	0 - Algo 1 - Non-Algo 2 - Algo through SOR 3 - Non-Algo through SOR
17	Sell Client Identity Flag	Flag indicating Sell Side beneficiary	Numeric	1	1,2,3	1 - Custodian 2 - Proprietary 3 - Client
Total Length				**127**		

5. Trigger File Details

To verify the downloaded files at client's end, trigger files have been added for each Order and Trade file for all segments. Please find following layout and segment wise trigger file distribution.

Message Layout			
Frequency	**For every file**		
Field No	**Name of the Field**	**Field Description**	**Other Comments**
1	MD5 sum	To verify data integrity using MD5 algorithm	MD5SUM= 32 Alphanumeric characters Global filename: SEG_FileType_DDMMYYYY.DAT.gz.trg Example: FAO_Trades_20112020_02.DAT.gz.trg Tigger content: a50a1646ae6dc59c66d3be3e15b9e1cf FAO_Trades_20112020_02.DAT.gz
2	Size of the file in bytes	To verify size of file in bytes.	Global filename: SEG_FileType_DDMMYYYY.DAT.gz.trg Example: FAO_Orders_20112020_02.DAT.gz.trg Tigger content: 10172205 sizes in bytes for file FAO_Orders_20112020_02.DAT.gz

Segment Wise Trigger File Distribution:

Segment	File name	Trigger file name
CM	CASH_Orders_DDMMYYYY_nn.DAT.gz	CASH_Orders_DDMMYYYY_nn.DAT.gz.trg
	CASH_Trades_DDMMYYYY_nn.DAT.gz	CASH_Trades_DDMMYYYY_nn.DAT.gz.trg
	CASH_Index_DDMMYYYY.DAT.gz	CASH_Index_DDMMYYYY.DAT.gz.trg
FAO	FAO_Orders_DDMMYYYY_nn.DAT.gz	FAO_Orders_DDMMYYYY_nn.DAT.gz.trg
	FAO_Trades_DDMMYYYY_nn.DAT.gz	FAO_Trades_DDMMYYYY_nn.DAT.gz.trg
CD	CDS_Orders_DDMMYYYY.DAT.gz	CDS_Orders_DDMMYYYY.DAT.gz.trg
	CDS_Trades_DDMMYYYY.DAT.gz	CDS_Trades_DDMMYYYY.DAT.gz.trg
COM	COM_Trades_DDMMYYYY.DAT.gz	COM_Trades_DDMMYYYY.DAT.gz.trg
	COM_Orders_DDMMYYYY.DAT.gz	COM_Orders_DDMMYYYY.DAT.gz.trg

6. Jiffy time conversion

The time specified in the order and trade files for all segments is recorded in jiffies. To properly convert jiffies into a valid timestamp, please adhere to the provided instructions.

The factors to be considered when converting jiffies to a timestamp are detailed below. An example is given using Excel formulas, but users may utilize any programming language for the conversion.

Sr. No.	Parameters	Values	Constants	Formulas
1.	Time (In Jiffy)	91200611817221	AB	
2.	1 second (In Jiffy)	65536	AC	
3.	Multiplier / Divider (For microseconds)	1000000	AD	
4.	Epoch time from 01-01-1980 12:00:00 AM GMT	315513000000000	AE	
5.	Epoch Time	1707123898089920	AG	((AB/AC)*AD)) + AE
6.	Calculation For Time	1707123898.089920	AH	AG/AD
7.	1 day (In seconds) (24*60*60)	86400	AI	
8.	In GMT (Format: dd-mm-yyyy hh:mm:ss.000)	05-02-2024 09:04:58.090	AJ	(AH/AI) + DATE(1970 , 1, 1)
9.	Local Time Zone IST (Format: dd-mm-yyyy hh:mm:ss.000)	05-02-2024 14:34:58.090	AK	AJ + TIME(5, 30, 0)

It is important to note that Excel's maximum precision is limited to milliseconds. However, it is possible to attain precision at the microsecond or nanosecond level through programming techniques.

7. Important Notes

7.1. Segment-Wise Historical Order & Trade Data Size Variations

The Historical Order & Trade Data structure sizes changes in chronological order across all segments:

Sr. No.	Effective Date Range		Segment	Order Size [Bytes]		Trade Size [Bytes]		Details
	From	To		Old	New	Old	New	
1	07-Sep-2020	To Date	FAO	NA	NA	123	124	Increase in Trade Number size
2	16-Dec-2021	To Date	FAO	111	112	NA	NA	Addition of Limit Price Indicator flag in Orders files
3	16-Dec-2021	To Date	CD	111	112	NA	NA	Addition of Limit Price Indicator flag in Orders files
4	01-Jul-2024	13-Jun-2025	CM	NA	NA	100	101	Increase in Trade Number size
5	28-Mar-2025	28-Mar-2025	CM	87	91	101	103	Refer Question 5 in 7.1 in FAQ Section
6	16-Jun-2025	To Date	CM	87	91	101	103	Increase in the Volume/ Quantity fields size
7	01-Nov-2025	To Date	COM	111	117	123	127	Increase in the Price fields size

7.2. Segment-Wise File Split Changes

The following are the segments in which the individual order and trade files were split according to the number of streams.

Sr. No.	Effective Date	Segment
1	02-NOV-2020	FAO
2	01-JUL-2025	CM

8. About SFTP (Secure File Transfer Protocol)

The file transfer takes place over SFTP (Secure FTP) protocol over the Internet.

The client is required to submit the SSH RSA Public Key of their machine along with their static public IP address to receive access details from NSE Data & Analytics (NDAL).

The following details will be provided once the request is processed by NDAL:

- URL
- SSH Service Port
- User ID
- File Path

General information on SFTP has been provided in the following sections for popular OS platforms.

8.1 SFTP on Linux platform

The Open SSH suite, which comes pre-installed in most Linux distributions, can be used for transferring files securely using SFTP.

The SSH key-pair is generally generated in the ".ssh" directory in the user's home directory.

It is highly recommended that you consult your systems administrator to generate/locate the key-pair and set up SFTP for you.

Continue reading for information on how to generate the key-pair.

8.1.1 Generation of the SSH RSA key-pair on Linux

- Generate the new key-pair with following command:

```
ssh-keygen -t rsa -C "user@host"
```

You will receive the following prompt:

```
Generating public/private rsa key pair.
"Enter file in which to save the key".
```

Press Enter to continue with the defaults.

You will receive the following prompt:

```
Enter file in which to save the key
(/host/users/user/.ssh/id_rsa):
```

Press Enter to continue with the defaults.

If a file already exists with the same name, then you will receive the following prompt:

```
/host/users/user/.ssh/id_rsa already exists.
```

```
Overwrite (y/n)?
```

Type "y" and press Enter to overwrite.

- You will be prompted to enter a passphrase as follows:
  `Enter passphrase (empty for no passphrase):` Press Enter to continue without a passphrase.

- You will be prompted to re-enter the passphrase:
  `Enter same passphrase again:`
  Press Enter again to continue without a passphrase.

After you enter a passphrase, you will be presented with the "Fingerprint" (or ID) of your SSH key.

It will look like this:

```
Your identification has been saved in
/host/users/user/.ssh/id_rsa.
Your public key has been saved in
/host/users/user/.ssh/id_rsa.pub.
The key fingerprint is:
87:c4:85:90:91:16:39:de:c2:26:49:4a:b3:38:80:97
user@host
```

After generating public key, user needs to share the Public Key file in exchange for requesting the credentials.

NOTE: In above steps the words "host" and "user" are used to represent the host name and username of the machine. This is used for demo purposes only. The same will differ as per your server and usernames.

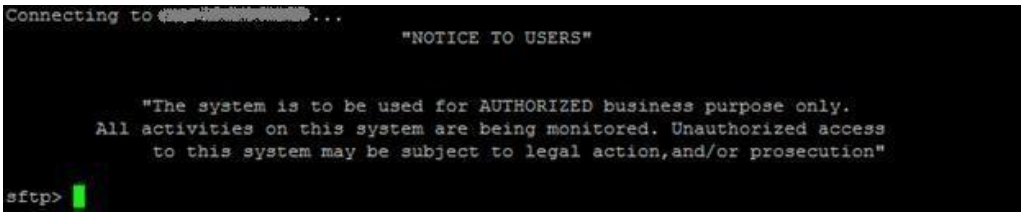
8.1.2 SFTP Login

Login to the Exchange Server over SFTP using the following command:

```
sftp -o PORT=6010 remote_user@remote_host
```

Where remote_user is the User ID provided to you by the Exchange upon sharing your Public Key and remote_host is the Exchange Server IP.

You should get the SFTP prompt as below, upon successful login:



8.1.3 Fetching files over SFTP

The SFTP "get" command may be used at the SFTP prompt for fetching the files while logged into the host over SFTP.

8.1.4 Ending the SFTP session

The SFTP "bye" command may be used for terminating the session.

8.1.5 SFTP commands help

Help may be obtained with SFTP commands by typing the "help" command at the SFTP prompt.

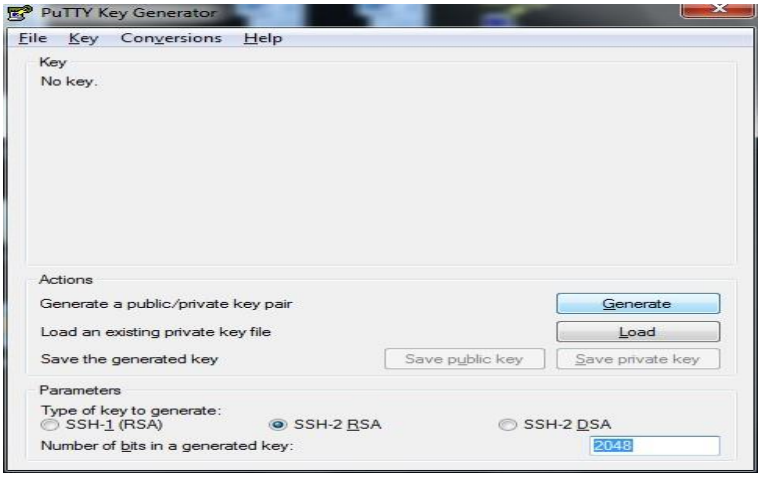
8.2. SFTP on Windows platform

8.2.1. Generation of the SSH RSA key-pair on Windows

This guide explains how to generate the SSH RSA key-pair using the PuttyGen application.

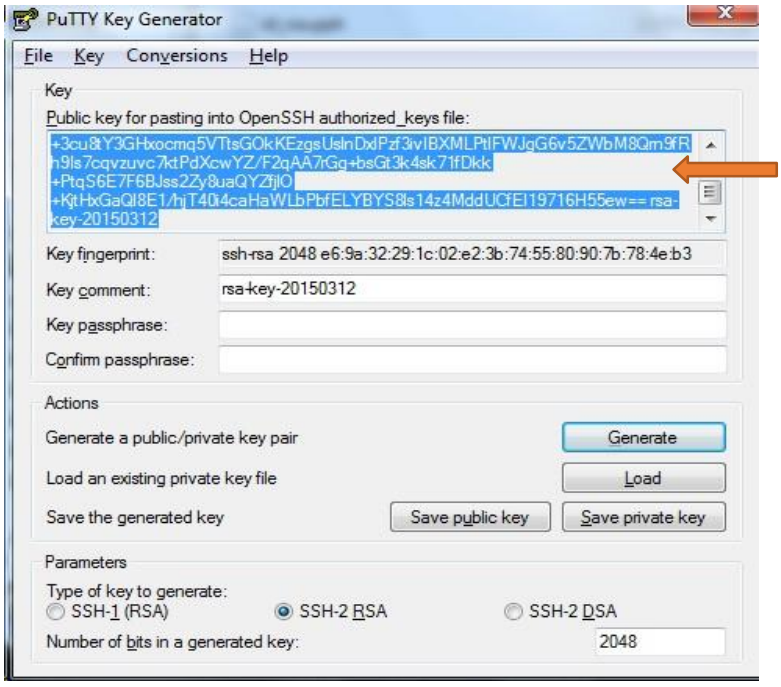
Download the PuttyGen application (freely available on the Internet). Then follow these steps to generate the key-pair:

- Start the PuttyGen application.
  You will be presented with a dialog which looks something like this:



- Select "SSH2RSA" with 2048-bit size or greater.
- Press the "Generate" button.

- After generating the key, you will be shown the screen below.
  Keep the "Key passphrase" and "Confirm passphrase" as blank.



SSH RSA Public Key should be copied from here after generation

- Create a blank file with the name "id_rsa.pub".
  This will be the public key file which will be populated with your Public Key and shared with the Exchange.

- Copy the public key content as presented on the screen (selected area in the screenshot below) and paste into newly created public key file (id_rsa.pub) and save the file.

- Share this Public Key File (id_rsa.pub) with the Exchange when requesting SFTP credentials.

8.2.2. SFTP Client Software on Windows

There are multiple SFTP Client Programs (paid for and free) available for transferring files over SFTP.

One such software is WinSCP, available for free from the WinSCP website. This program is intuitive, user friendly and can be used in interactive mode (GUI) as well as from the command line (for automation/batch processing).

Information on using WinSCP can be found on the WinSCP website.

8.3. Further support

Apart from the above guide, many of the online resources can be referred to on the World Wide Web for more information on how to set up and use SFTP at the Client's site on various OS platforms.

Note: This "About SFTP" section is intended as a guide used to understand and become familiarized with this transfer protocol.

It may be noted that the Exchange does not provide SFTP software or support for configuring and using SFTP at Client site.

9. Annexure

9.1 Acronyms Used

BOD	Begin Of Day Information
EOD	End Of Day Information
Online	Information Sent During Market Timing
CM	Cash Market
FO/FAO	Future & Options Market
CD	Currency Derivatives Market
COM	Commodity Market
IOC	Immediate Or Cancel
FOK	Fill Or Kill
MKT	Market
SOR	Smart Order Routing
LF	Line Feed
DQ	Disclosed Quantity

10. FAQs

10.1. General

1) What is the client identity flag indicating beneficiary- Custodian, Proprietary and Client?
   Custodian – A custodian is a member, who settles trades on behalf of their clients.
   Proprietary – A trading member places the Order with its own fund.
   Client – Retail

2) Is the Volume disclosed functionality being applicable in FAO segment?
   The Volume disclosed functionality is not applicable in FAO segment

3) Can a single symbol appear in more than one stream within the CM Historical application?
   Yes, a single symbol can appear across multiple streams. This typically happens when the symbol is traded under different series, with each series potentially linked to a distinct stream in the CM Historical application.

4) Are the CM Historical Files dated March 28, 2025, free from data integrity issues?
   Yes, the files for March 28, 2025, are available and verified to be free of data integrity issues. These files reflect updated record lengths:

   CM Order record: 91 bytes
   CM Trade record: 103 bytes

   Background:
   On March 28, 2025, an individual order quantity exceeded the previous 8-digit limit of 99,999,999. To accommodate this, the quantity fields in both Order and Trade records were expanded to support up to 10 digits.

   Note:
   - The above record lengths apply only to the files dated March 28, 2025.
   - Starting June 16, 2025, the increased record lengths will be adopted for all CM Order and Trade files.
   - Files dated prior to June 16, 2025, will retain the original lengths of 87 bytes (Order file) and 101 bytes (Trade file).

5) Why are volumes in the Capital Market (CM) segment unusually low on certain days?
   Lower volumes on specific days are typically due to special trading events such as:

- **Muhurat Trading** – Conducted annually on Diwali, this symbolic session is shorter and sees limited participation.
- **Special Live Trading Sessions** – Organized to test the Business Continuity Plan (BCP) as mandated by SEBI, these sessions often involve reduced trading hours and limited activity.

10.2. Historical Data Download

1) What methods are available for downloading the Historical data?
   There are 3 methods to download the Historical data
   1. SFTP (End of Day)
   2. NSE Downloader client (Through Internet).
   3. Through Cloud

10.3. EOD Download (for SFTP only)

1) At what time do files become available in SFTP for download?
   Below are the timings of file availability on SFTP

Sr. No	Segment	Timing
1	CM	09:00PM IST
2	FAO	01:00AM IST (Next day)
3	CD	09:00PM IST
4	COM	01:00AM IST (Next day)

   The timings mentioned above are provisional. Please be aware that the availability of the files may be affected by any delays from the source.

2) At what time does the corresponding checksum file become available in SFTP for a trades/orders file?
   The checksum will be available only after the completion of order and trade files DAT & trg files.
   Please note that the availability of the checksum files is subject to the delay if any from the source end.

3) For how many days the files will be available in SFTP?
   The previous three days files will be available in SFTP for all segments.

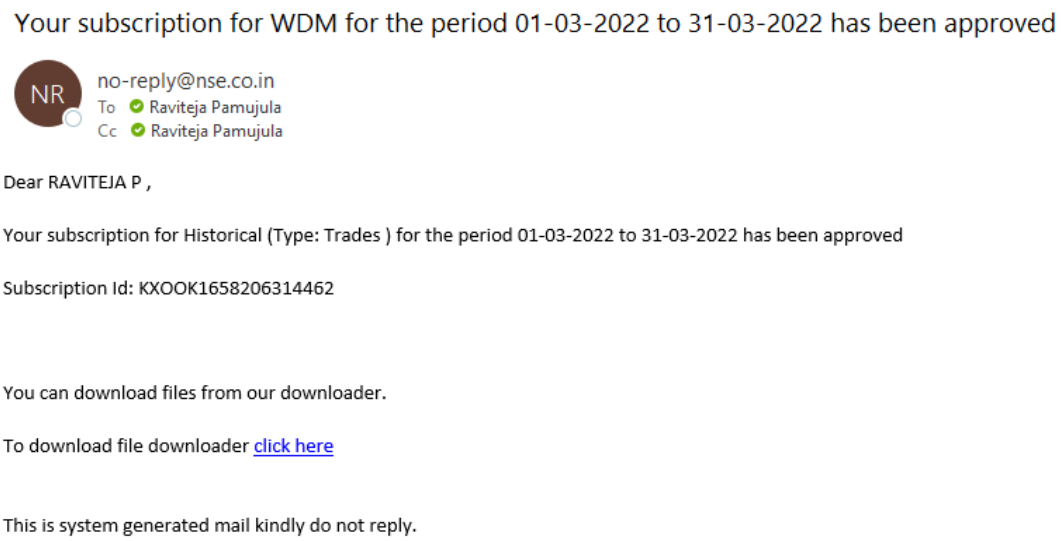
4) Download of files through SFTP was working till last week, suddenly our connection to sftp is failing. How do we resolve it?
   If you use SFTP on Windows, please ensure you are using the latest version of WinSCP or any other equivalent tool.

If you are using SFTP programmatically or through an API, please ensure you **don't use the following cipher**:

- diffie-hellman-group-exchange-sha1
- diffie-hellman-group14-sha1
- diffie-hellman-group1-sha1

10.4. Historical Data Download (Through Downloader application)

1) How to download the data?
Once the subscription request approved by NSE Team, user will receive mail like below with subscription id and link to data downloader.


Your subscription for WDM for the period 01-03-2022 to 31-03-2022 has been approved

NR no-reply@nse.co.in
To Raviteja Pamujula
Cc Raviteja Pamujula

Dear RAVITEJA P ,

Your subscription for Historical (Type: Trades) for the period 01-03-2022 to 31-03-2022 has been approved

Subscription Id: KXOOK1658206314462

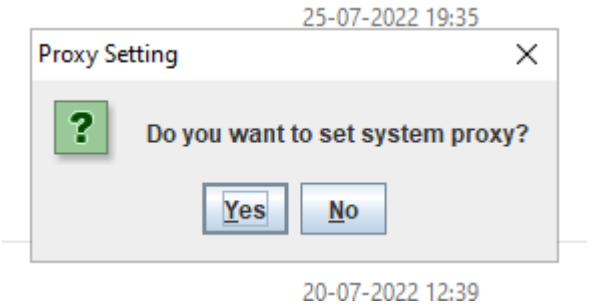
You can download files from our downloader.

To download file downloader click here

This is system generated mail kindly do not reply.

To download to downloader client user must click on click here link.

2) How to set System Proxy in downloader client?
After opening downloader client user will get window like below



Select Yes if user accessing internet through LAN (Wired connection).
Select No if user is accessing internet through WLAN/WIFI (Wireless connection).

3) How to Check number of files and total downloadable size for a subscription?
After successful user authentication, one file will be generated in the user's system in location same as downloader client in below format
downloader_Subscriptionid _size.txt
ex: downloader_KXOOK1658206314462_size.txt

Sample content:

26-07-2022 20:00:030 PM: List of all the files
CASH_Orders_26062022.DAT.gz file size is 1534899 in Bytes which is equal to 1.46 MB
CASH_Trades_26062022.DAT.gz file size is 5029 in Bytes which is equal to 4.91 KB
CASH_Index_26062022.DAT.gz file size is 10880 in Bytes which is equal to 10.62 KB
Total number of files count is 3
Total size of all the files is 1550808 in Bytes which is equal to 1.48 MB

4) How to check correctness of downloaded files?
For daily data user can make use of trg files for the files from 01 Dec 2020. Kindly refer section 5 for more details about trg files. For remaining data, Kindly check previous question.

5) We are currently experiencing a low speed in downloading the files, can this be made faster in any way?
We have a shared bandwidth of 1 Gbps. The speed of the download will depend on many factors how many hops your internet provider has and lastly on the number of clients downloading the data feed at the same time from our server.

6) How many concurrent downloads can we have for each subscription?
Concurrent download is not allowed.

7) Is there any bandwidth limitation at NDAL to download the files?
There is no capping of bandwidth to download the files.

8) How many files can be downloaded at a time?
Only five files are allowed to download at a time, once the file downloaded then the next file i.e. 6th file will start downloading automatically.

9) We are getting "Internal server error" while logging to downloader client? what should we do next?
Please Re-run the downloader client and check.

10) We are getting error "Only one system can be allowed to download the files" while trying to download the files?
Please download the files from the system where you have installed the downloader client and attempted the downloading of files for the first time.

11) We are unable to login to the historical data website. Our account is showing as locked out when trying to login to the site?
Please click on the "Forget Password" option link for receiving the password over email and try to login with the received password.

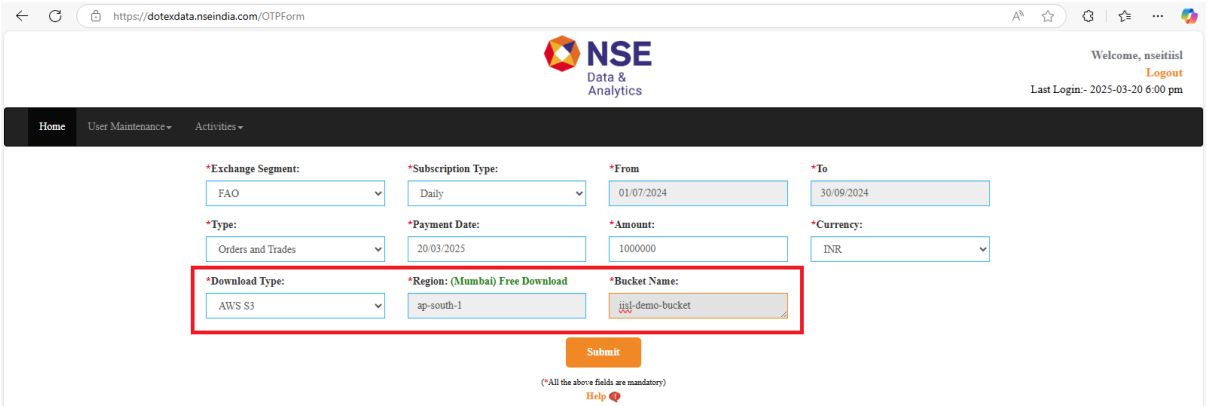
10.5. Historical Data Download (Through Cloud)

1) Is the Historical data available on Cloud?
Yes. The Historical data available on cloud. At present, AWS cloud is supported.

The AWS download involves the transfer of historical data from the NDAL S3 bucket to the client's S3 bucket. The data transfer occurs at a remarkably high speed, supported by the AWS infrastructure, and the entire process is conducted securely.

2) What are the pre-requisites for using Cloud download?
- An active AWS account is necessary to create and manage the S3 bucket.
- The S3 bucket must be provisioned in the Mumbai region.
- NDAL will deliver the subscribed data directly to the client-owned S3 bucket.
- To facilitate a seamless transfer process, the client must grant the necessary permissions for file transfers to the designated S3 bucket.

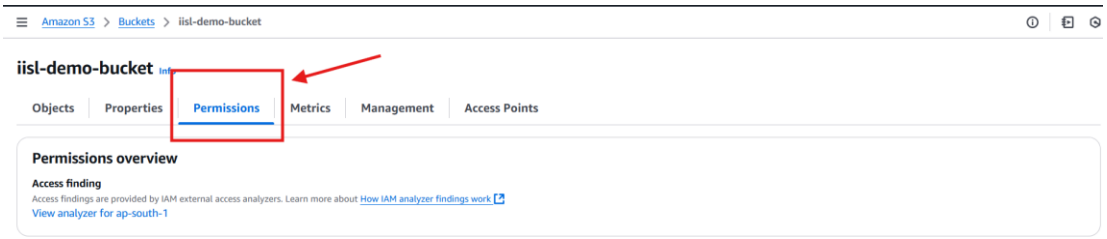
3) What information do I need to provide?
- Client needs to provide the created bucket name and region name (will be Mumbai by default) while subscribing for data.



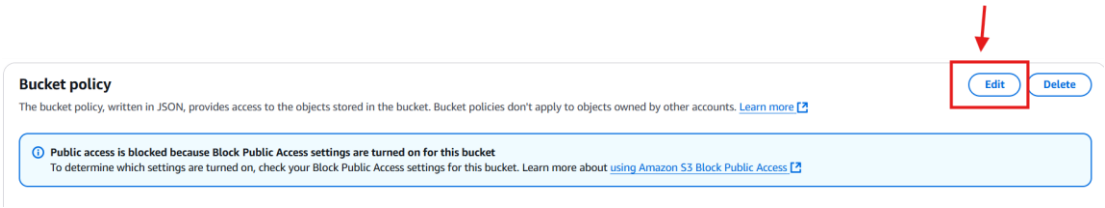
- Additionally, client needs to provide permissions for file transfers to the specified S3 bucket.

4) How do I add necessary permissions to my bucket?
Assuming you are using Default Encryption (SSE-S3), please follow the step below to add permissions to your bucket.

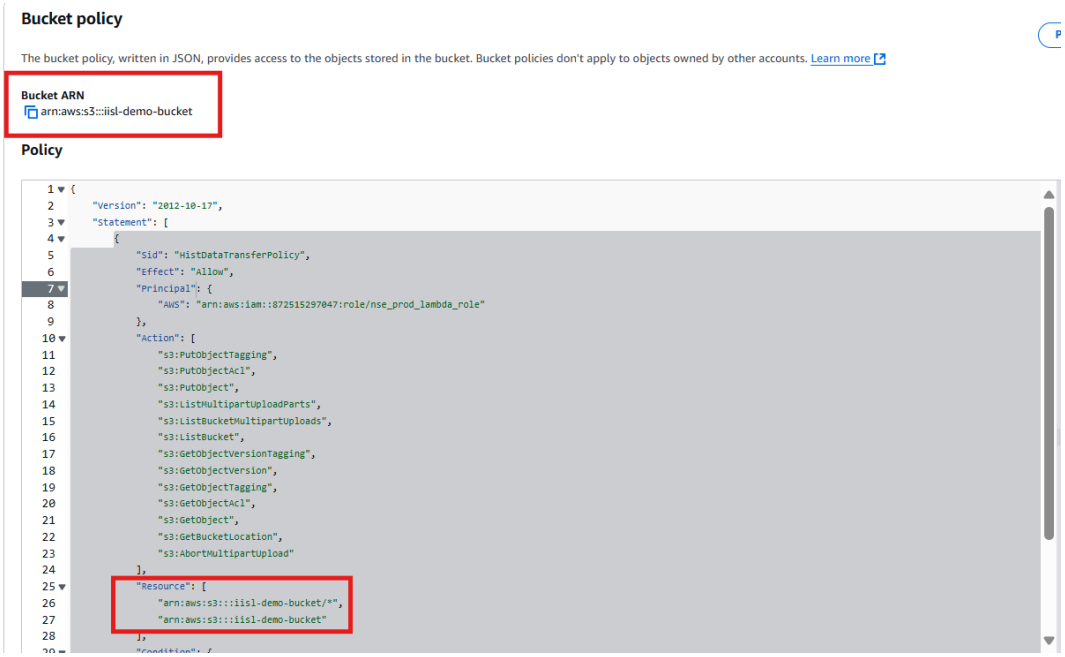
Step 1: Click on your bucket and Go to Permissions.



Step 2: Edit the bucket Policy and Paste the policy given below.



Ensure that you copy and paste your bucket's ARN to "Resource" as shown in screenshot and save the changes.



Below is the Policy you need to add: -

```
{
	"Version": "2012-10-17",
	"Statement": [
		{
			"Sid": "HistDataTransferPolicy",
			"Effect": "Allow",
			"Principal": {
				"AWS":
		"arn:aws:iam::872515297047:role/nse_prod_lambda_role"
			},
			"Action": [
				"s3:PutObjectTagging",
				"s3:PutObjectAcl",
				"s3:PutObject",
				"s3:ListMultipartUploadParts",
				"s3:ListBucketMultipartUploads",
				"s3:ListBucket",
				"s3:GetObjectVersionTagging",
				"s3:GetObjectVersion",
				"s3:GetObjectTagging",
				"s3:GetObjectAcl",
				"s3:GetObject",
				"s3:GetBucketLocation",
				"s3:AbortMultipartUpload"
			],
			"Resource": [
				"your-bucket-arn/*",
				"your-bucket-arn"
			],
			"Condition": {
				"Bool": {
					"aws:SecureTransport": "true"
				}
			}
		}
	]
}
```

5) Why are extensive permissions required on our S3 bucket as mentioned earlier, especially considering it may contain proprietary data?
   These permissions are essential for the following reasons:
   - **File Integrity Verification**: To ensure that the downloaded files have not been corrupted or altered.
   - **Download Completion Check**: To confirm that the entire file has been successfully downloaded. If a partial download is detected, the system uses the resume functionality to complete it.

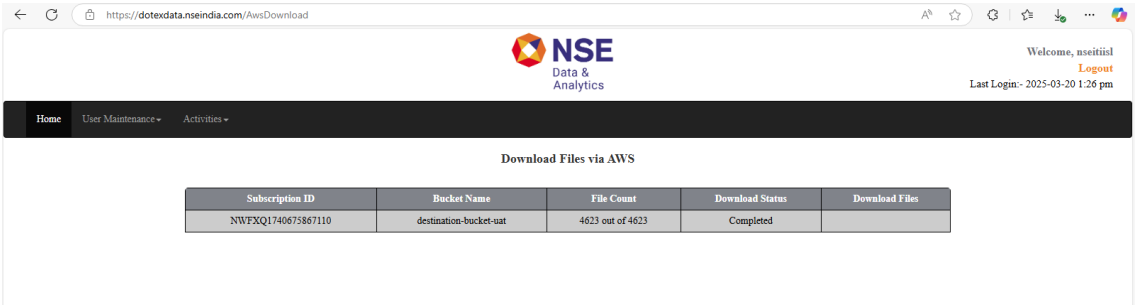
6) Will this transfer affect my existing data in the bucket?
No, it won't. Please note that we will be transferring the subscribed data to the designated bucket.

7) Do I have to pay for downloading Historical Data using AWS?
Since data transfer will be within same region (Mumbai: ap-south-1), it will be free cost (this pertains to data transfer from our S3 bucket to client's S3 bucket).

8) What if I want to transfer data to Bucket which is in different region?
Currently, data transfer outside of Mumbai region is not supported.
Suppose your bucket is based in a different region like US East (us-east-1) or Hyderabad (ap-south-2), you will have to transfer data from your Mumbai bucket (ap-south-1) to your desired region bucket.

9) How will I know If data is being transferred in my AWS Bucket?
The client can check the status of the transfer by 2 methods:

- Navigate to Activities tab -> Download files via AWS tab to see file transfer status. File transfer status is updated automatically on website every 5 mins.



- In the client S3 bucket, check file transfer status.

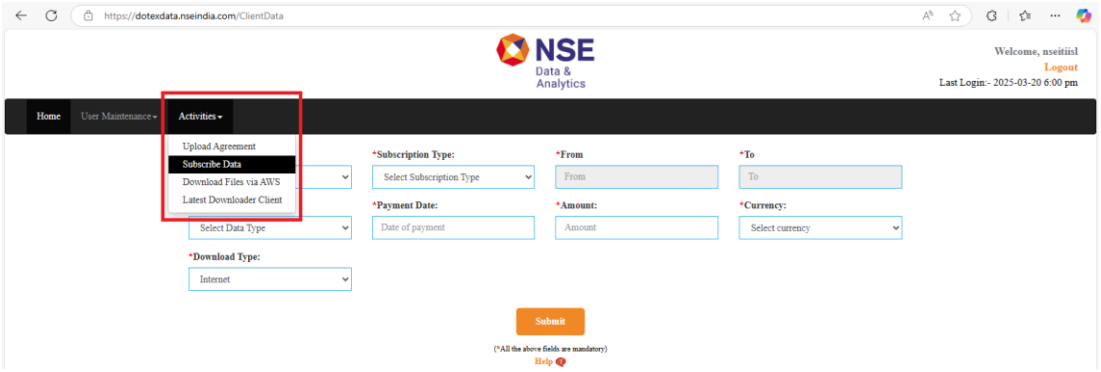
10) If any file is corrupted while transfer, how will I get it again?
In cases of corrupted files, you may submit a request for the retransfer of those files by sending us an email at marketdata@nse.co.in

11) Can I request data redownload?
Clients may request for data redownload solely in instances where the data is either corrupted or missing. The transfer of data to AWS S3 bucket is a one-time activity.

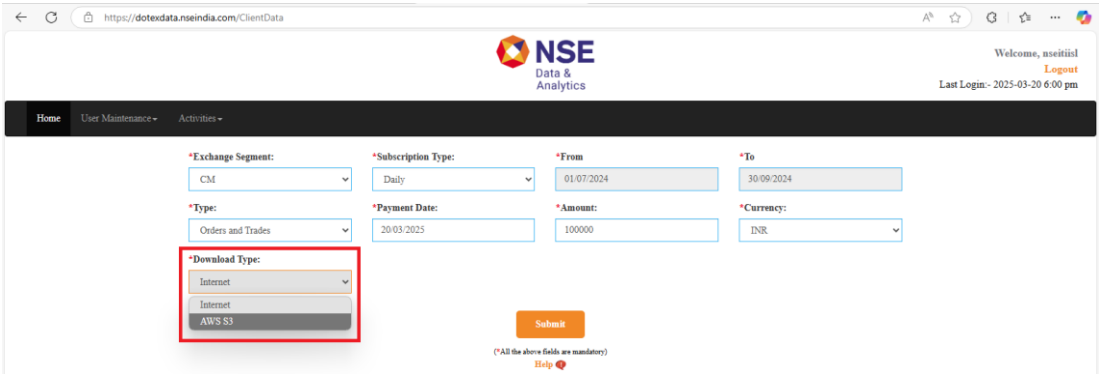
12) Can I switch/edit a subscription from Internet to AWS?
You need to re-subscribe (create a new Subscription).

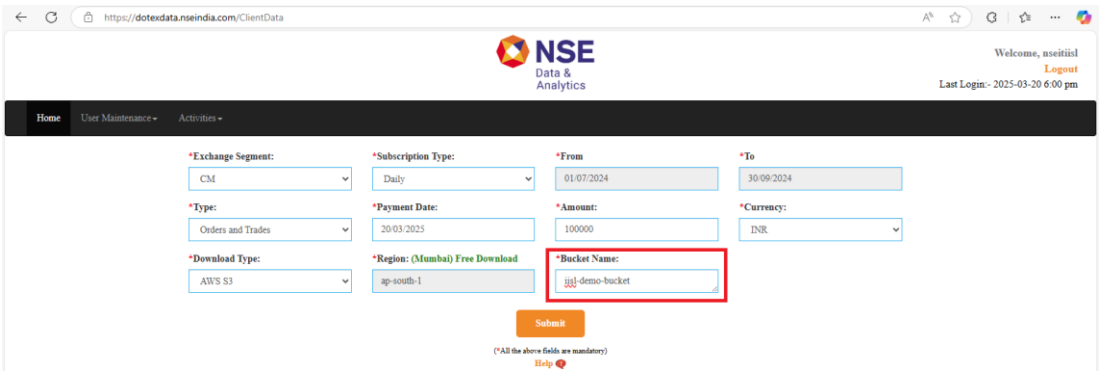
13) How to subscribe for AWS data?

- Login to https://dotexdata.nseindia.com/
- Navigate to Activities -> Subscribe Data



- In Download Type Dropdown, select AWS Download and enter your bucket name (your bucket needs to be created in Mumbai region).



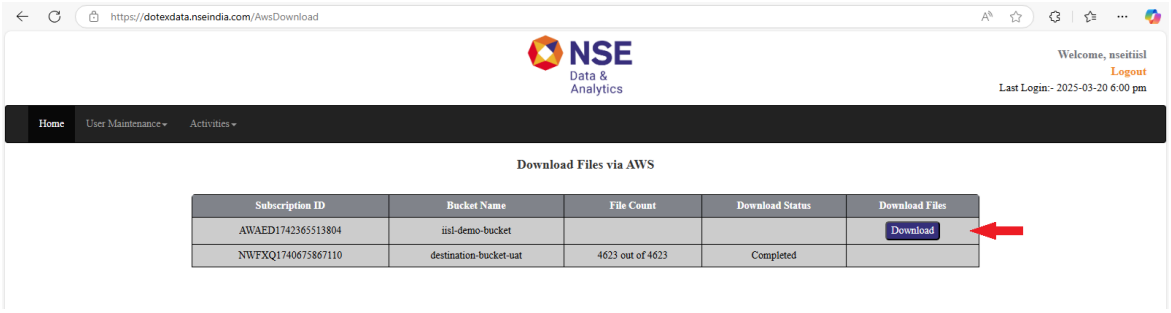


14) How to download AWS data?

Once you have created a new subscription to download files via AWS, you need to give following permissions on that bucket so that subscribed files can be pushed from NDAL S3 bucket to your S3 bucket.

15) How to start transfer from NDAL S3 to clients S3 bucket

Once you have subscribed for data via Activity -> Subscribe Data-> AWS download and given NDAL necessary permissions to write into your S3 Bucket, navigate to Activities tab -> Download files via AWS tab and click on "Download" button. The data transfer will be in few minutes.



16) Are the downloaded files encrypted or unencrypted?

The files that are transferred will be in compressed format (.gz). The client will need to decompress the files to read the data which are in readable format.

11. Contact Information

Name	Email	Contact Number
Business & Technical Support	marketdata@nse.co.in	+91-22-26598385