MARKET FEED
Futures and Options (FO)
(LEVEL – 1, LEVEL – 2)

Version: 1.10

Date: 03 August 2026

NSE DATA & ANALYTICS LIMITED
EXCHANGE PLAZA,
PLOT NO. C/1, G BLOCK,
BANDRA-KURLA COMPLEX,
BANDRA (E), MUMBAI 400 051.
INDIA.

COPYRIGHT NOTICE

Revision History

Name	Description	Date
Version 1.0	New Specification Issued	12 February 2013
Version 1.1	Correction in FS message structure	25 April 2013
Version 1.2	Removal of TCP/IP Session	29 October 2021
Version 1.3	Addition of fields in BOD – Master information	16 November 2021
Version 1.4	Contract Name mapping example	06 December 2021
Version 1.5	Level 1 & Level 2 documents combined	07 August 2024
Version 1.6	1. Updating Tick Size Field Description in BOD - Master Information and EOD – Master Addition/Modification/Deletion 2. Added 2 questions in FAQs section	08 November 2024
Version 1.7	Updated size of Open Interest datatype in Online – Open Interest Information and EOD – Market Status	05 October 2025
Version 1.8	1. Added pre-open market session in • Online - Market Status Message, • Online - Normal Market Contract Update Information, • Online – Normal Market Contract 5 Depth Update and Notes. 2. Addition of Price discovery indicator in ST_CONTRACT_ELIGIBILITY_PER_MARKET in BOD – Master Information 3. Added remarks for ATO in MARKET_DEPTH_BUY_ORDER_INFO and MARKET_DEPTH_SELL_ORDER_INFO in 4.7 Online – Spread Contract 5 Depth Update 4. Added FAQ for ATO	08 December 2025
Version 1.9	1. Permitted to Trade field added in 3.1 BOD – Master Information section 2. Added FAQ 3. Addition of BSE in section 8.1 - Acronyms Used	06 July 2026
Version 1.10	1. Introduction of Closing Auction Session (CAS) in following messages: • 3.1 BOD & Online Master Information • 3.8 Online – CAS Reference Price Update 2. Addition Closing Auction Session (CAS) and VWAP in section 7 - Acronyms Used 3. Addition of section 6.2 Closing Auction Session	03 August 2026

Table of Contents

Market Feed – Futures and Options (Level 1 & Level 2)

1 Introduction

NSE Data & Analytics Ltd. offers real-time data and historical data products from NSEIL to a diverse range of clients. This includes 5 real-time products and 2 historical data products:

Real Time data products
1. Real Time Data
2. Snapshot Data
3. Corporate Data
4. Analytical Products data
5. Indicative NAV Data

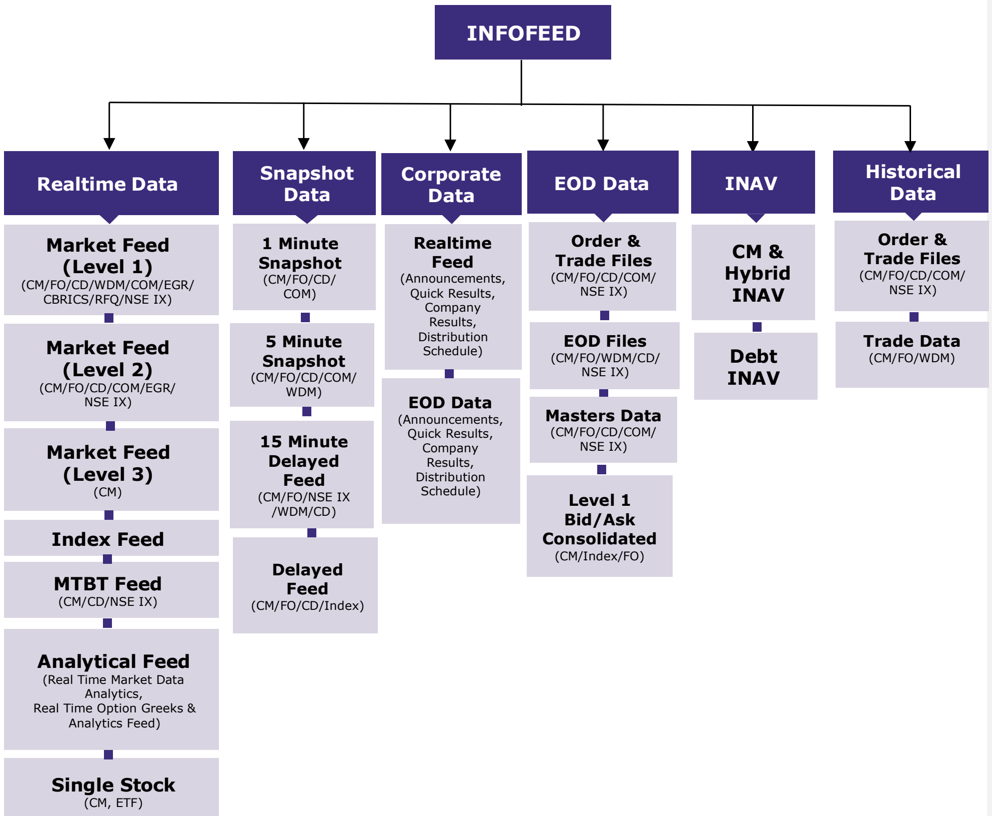
Historical data products
1. End of Day Data
2. Historical Data

The data products are provided through delivery modes mentioned below:

- **Real-time and Snapshot Data**: The information is transmitted as a packet broadcast, facilitating ongoing distribution through data feeds via point-to-point leased line and the snapshot data through SFTP protocol.

- **End-of-Day and Historical Data**: The data is delivered as downloadable files over the internet using the SFTP protocol and through cloud.

All these data categories are integrated within the Infofeed platform, ensuring comprehensive coverage and streamlined access.



NSE Data & Analytics Ltd. (NDAL) provides a comprehensive suite of real-time and historical market data products sourced from NSEIL, supporting a wide range of analytical, regulatory, and archival use cases across the Capital Market (CM), Futures & Options (FO), Currency Derivatives (CD), Commodity Derivatives (COM), and NSE IX segments. These products deliver both high-frequency intraday information and structured end-of-day datasets to meet diverse client requirements.

This document explains about the NSE – Market Feed (FO Level 1 & Level 2) products. Through this product on a real-time basis all the NSE's market update information is disseminated.

2 Packet Format

Server sends all the packets in the following format

```
typedef struct
{
        CHAR        cCompOrNot;
        SHORT       nDataSize;
        SHORT       iNoOfPackets;
}ST_COMP_BATCH_HEADER;

typedef struct
{
        SHORT       iCode;
        SHORT       iLen;
        LONG        lSeqNo;
} ST_INFO_HEADER;

typedef struct
{
        .
        .
}ST_DATA_INFO;

typedef struct
{
        SHORT       iCheckSum;
        CHAR        cEOT;
} ST_INFO_TRAILER;

typedef struct
{
        ST_INFO_HEADER stInfoHdr;
        ST_DATA_INFO stDataInfo;
        ST_INFO_TRAILER stInfoTrailer;
        .
}ST_DATA_PACKET;
```

All the packets received from the server consist of a compress batch header. The compress batch header provides metadata about the associated data packet, including:

- Whether the packet is compressed.
- The number of individual packets contained within.
- The total size of the data packet.

To process the data, the client must apply the LZO decompression algorithm to decompress the packet and retrieve its contents.
After decompression each data packet consists of ST_INFO_HEADER, which has the iCode field to identify the type of the packet. Using iCode field, data info packets are mapped to the respective data packets.

2.1 Data Types

Data types used in feed:

Data Type	Size In Bytes
CHAR	1
SHORT	2
LONG	4

Byte order - Big Endian
All structures are pragma pack 1.

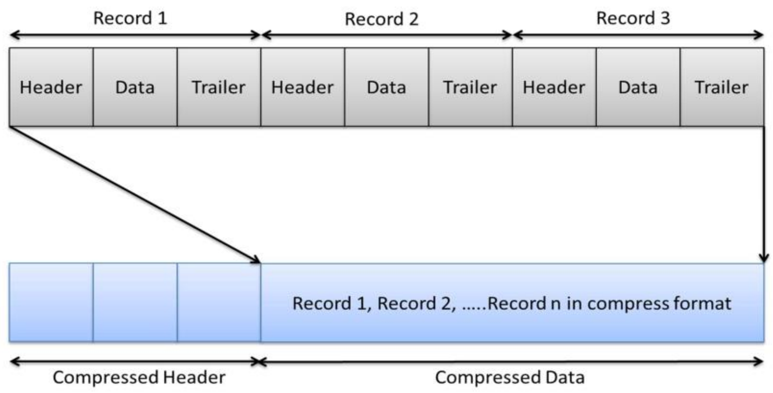
2.2 Twiddling Mechanism

Twiddling refers to the reversal of byte order in a multibyte data element, such that the byte at position *n* is moved to position *1*, the byte at position *(n−1)* is moved to position *2*, and so on.

This operation is required to address differences in endian representation across systems. In big-endian format, the most significant byte (MSB) is stored at the lowest memory address (leftmost position), whereas in little-endian format, the MSB is stored at the highest memory address (rightmost position). For instance, Intel x86 architectures follow little-endian representation, while architectures such as SPARC, Motorola 68K, and PowerPC follow big-endian representation.

All protocol layers in the TCP/IP suite use big-endian (network byte order). Since the trading system host operates in big-endian format, any numeric values originating from or being processed on little-endian systems shall be twiddled prior to transmission and after reception over TCP/IP connections to ensure correct interpretation.

2.3 Diagrammatic Representation of Packet Format



Compressed Header

1. Compressed/ Uncompressed = 0 then compressed/ 1 uncompressed
2. Number of packets = Number of records in compressed data
3. Data Size = Compressed data size

As the data packets are sent in compressed format there is a need to decompress them. The compression algorithm used is LZO.

Steps to decompress a packet and extract data from it

- Receive a packet from the feed and check ST_COMP_BATCH_HEADER's cCompOrNot to see if the data is compressed or not.
- If the cCompOrNot flag is '0' then the data is compressed so use LZO Decompress to extract the data. The position of data would be the difference in position between the received bytes and the ST_COMP_BATCH_HEADER size.
- If the cCompOrNot flag is '1' then the data is not compressed so just copy the bytes after the header to get the data.
- Type cast the data above data to ST_INFO_HEADER and get iCode from it. iCode can be used to identify the type of packet.
- Based on iCode, map the data section into the required structure.
- After the data section, map the trailer ST_INFO_TRAILER to get the iCheckSum i.e. checksum (Refer to section checksum calculation)

3 Sequenced Data Message

Sequenced data messages are sent by server which contains the actual market data.

3.1 BOD & Online - Master Information

These packets are sent before market opening and throughout the trading day. This feed contains information about the contracts valid in the FO Market for trading.

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Code	SHORT	'FT'	
Length	SHORT	Numeric	Size of (INFO HEADER + INFO DATA + INFO TRAILER)
Sequence Number	LONG	Numeric	Application sequence number
INFO DATA			
Token Number	CHAR [10]	Character	Each token number is unique, and it indicates a unique contract.
Instrument Type	CHAR [6]	Character	'FUTSTK' - Stock Futures 'OPTSTK' - Stock Options 'FUTIDX' - Index futures 'OPTIDX' - Index Options 'FUTINT' - Interest Futures 'UNDINT' - Interest Underlying
Symbol	CHAR [10]	Character	This field contains the symbol of contract.
Expiry Date	CHAR [11]	Character	Expiry date indicates the last day till which a particular contract is available for trading. Expiry date in number of seconds elapsed from midnight 01-Jan-1980
Strike Price	CHAR [10]	Character	The value will be in paisa for Options, and the value will be '-1' for Futures contracts

Option Type	CHAR [2]	Character	Describes the option type for option contracts. 'CA' – Call American 'CE' – Call European 'PE' – Put European 'PA' – Put American 'A' indicates American option on which settlement can be done on any day till the expiry day. 'E' indicates European option for which settlement can be done only on expiry day. It will be 'XX' for Futures contracts
Category	CHAR [1]	Character	The market hours on which the contract is available to trade. The following will be the values. '1' - Represents Regular market hours. '2' - Represents Extended market hours.
Delete Flag	CHAR [1]	Character	'Y' = Deleted 'N' = Not Deleted
Low Price Range	CHAR [10]	Character	Minimum price at which order can be placed without causing a price freeze. For CAS eligible future contracts, it will be updated with low price of CAS contracts (-3% of reference price)
High Price range	CHAR [10]	Character	Maximum price at which order can be placed without causing a price freeze. For CAS eligible future contracts, it will be updated with low price of CAS contracts (+3 % of reference price)
Contract Eligibility Per Market	ST_CONTRACT _ELIGIBILITY _PER_MARKET [4]	Structure	Refer to the table given below ST_CONTRACT_ELIGIBILITY_PER _MARKET
Contract Name	CHAR [25]	Character	This field is provided for distinguishing the monthly and weekly contracts.
Regular Lot	CHAR [10]	Character	Standard number of units per FO contract (Lot Size)

Tick Size	CHAR [10]	Character	Tick size of a contract.
Maturity Date	CHAR [10]	Character	It is same as the expiry date and indicates the last day up to which the contract is available for trading. It can be extended under special circumstances.
Permitted To Trade	CHAR [1]	Character	‘0’ - Listed but not permitted to trade ‘1’ - Permitted to trade ‘2’ - BSE listed (Refer to FAQ 9 for more details.)
INFO TRAILER			
Checksum	SHORT	Numeric	Refer to section checksum calculation
End Of Trailer	CHAR [1]	‘\r’	Carriage Return

ST_CONTRACT_ELIGIBILITY_PER_MARKET

Field Name	Data Type	Value	Brief Description
ST_CONTRACT_ELIGIBILITY_PER_MARKET			
Market Type	CHAR [1]	Character	'N' = Normal 'S' = Spot (not used) 'O' = Odd Lot (not used) 'A' = Auction
Eligibility	CHAR [1]	Character	'1' = Allowed to trade '0' = Not allowed to trade
Contract Status	CHAR [1]	Character	'1' = Pre-open '2'= Open (Only for Normal market) '3' = Suspended '4' = Pre-open extended '5' = Stock Open with Market '6' = Price Discovery

3.2 Online - Market Status Message

This message is sent by the server whenever the market status changes.

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Code	SHORT	'PO' 'PC' 'FO' 'FC'	'PO' = Pre-open session start 'PC' = Pre-Open session end 'FO' = Normal market Open 'FC' = Normal market Close
Length	SHORT	Numeric	Size of (INFO HEADER + INFO DATA + INFO TRAILER)
Sequence Number	LONG	Numeric	Application sequence number
INFO DATA			
Market Type	CHAR [1]	Character	'N' = Normal Market session 'X' = Extended Market
INFO TRAILER			
Checksum	SHORT	Numeric	Checksum is not calculated, so it is sent as 0 (Zero)
End Of Trailer	CHAR [1]	'\r'	Carriage Return

3.3 Online – Open Interest Information

This packet is sent during the trading hours, and it indicates the Open Interest of the various contracts traded.

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Code	SHORT	'FI'	
Length	SHORT	Numeric	Size of (INFO HEADER + INFO DATA + INFO TRAILER)
Sequence Number	LONG	Numeric	Application sequence Number
INFO DATA			
Instrument Type	CHAR [6]	Character	'FUTSTK' - Stock Futures 'OPTSTK' - Stock Options 'FUTIDX' - Index futures 'OPTIDX' - Index Options 'FUTINT' - Interest Futures 'UNDINT' – Interest Underlying
Symbol	CHAR [10]	Character	This field contains the symbol of contract.
Expiry Date	CHAR [11]	Character	Expiry date indicates the last day till which a particular contract is available for trading. Expiry date in number of seconds elapsed from midnight 01-Jan-1980
Strike Price	CHAR [10]	Character	The value will be in paisa for Options, and the value will be '-1' for Futures contracts
Option Type	CHAR [2]	Character	Describes the option type for option contracts. 'CA' – Call American 'CE' – Call European 'PE' – Put European 'PA' – Put American 'A' indicates American option on which settlement can be done on any day till the expiry day. 'E' indicates European option for which settlement can be done only on expiry It will be 'XX' for Futures contracts
Open Interest	CHAR [12]	Character	Total number of outstanding contracts not yet closed or settled.

Market Type	CHAR [1]	Character	'N'=Normal 'O'=Odd lot (not used) 'S'=Spot (not used) 'A'=Auction
Timestamp	CHAR [11]	Character	Time expressed as seconds since 01-01-1970 00:00:00 (Epoch time).
INFO TRAILER			
Checksum	SHORT	Numeric	Refer to section checksum calculation
End Of Trailer	CHAR [1]	'\r'	Carriage Return

3.4 Online - Normal Market Contract Update Information

NSE contract update information for pre-open and normal market is sent in level 1 through this message.

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Code	SHORT	'PN' 'FN'	'PN' = Pre-open session updates 'FN' = Normal market updates
Length	SHORT	Numeric	Size of (INFO HEADER + INFO DATA + INFO TRAILER)
Sequence Number	LONG	Numeric	Application sequence Number
INFO DATA			
Instrument Type	CHAR [6]	Character	'FUTSTK' - Stock Futures 'OPTSTK' - Stock Options 'FUTIDX' - Index futures 'OPTIDX' - Index Options 'FUTINT' - Interest Futures 'UNDINT' – Interest Underlying
Symbol	CHAR [10]	Character	This field contains the symbol of contract.
Expiry Date	CHAR [11]	Character	Expiry date indicates the last day till which a particular contract is available for trading. Expiry date in number of seconds elapsed from midnight 01-Jan-1980
Strike Price	CHAR [10]	Character	The value will be in paisa for Options, and the value will be '-1' for Futures contracts
Option Type	CHAR [2]	Character	Describes the option type for option contracts. 'CA' – Call American 'CE' – Call European 'PE' – Put European 'PA' – Put American 'A' indicates American option on which settlement can be done on any day till the expiry day. 'E' indicates European option for which settlement can be done only on expiry day. It will be 'XX' for Futures contracts.

Market Type	CHAR [1]	Character	'N' = Normal 'O' = Odd lot 'S' = Spot 'A' = Auction
Timestamp	CHAR [11]	Character	Time expressed as seconds since 01-01-1970 00:00:00 (Epoch time).
Best Buy-Order price	CHAR [10]	Character	Best Buy side's outstanding Order Price
Best Buy-Order Quantity	CHAR [12]	Character	Best Buy side's outstanding Order Quantity
Best Sell-Order price	CHAR [10]	Character	Best Sell side's outstanding Order Price
Best Sell-Order quantity	CHAR [12]	Character	Best Sell side's outstanding Order Quantity
Last Traded Price (LTP)	CHAR [10]	Character	This represents the last traded price for contract. In the absence of any trade during the day, the system will default to the previous day's last traded price; if unavailable, the base price is applied.
Total Traded Quantity (TTQ)	CHAR [12]	Character	Represents the aggregate quantity of a contract traded on the current day. TTQ = Number of Contracts Traded * Lot Size
Contract Status	CHAR [1]	Character	'S' = Suspended ' ' = Non-suspended
Opening Price	CHAR [10]	Character	Contract's opening price for day
High Price	CHAR [10]	Character	Contract's high price for the day
Low Price	CHAR [10]	Character	Contract's low price for the day
Close Price	CHAR [10]	Character	Contract's close price: During trading previous day's close price is sent. After the market closes, current day's close price is calculated and sent through this field
Average Trade Price	CHAR [10]	Character	Weighted average price of the contract (i.e. value / quantity)

Total Turnover	CHAR [25]	Character	Contract traded value i.e. Average Trade Price * TTQ
INFO TRAILER			
Checksum	SHORT	Numeric	Refer to section checksum calculation
End Of Trailer	CHAR [1]	'\r'	Carriage Return

3.5 Online – Normal Market Contract 5 Depth Update

NSE contract update information (5 depth market update) for pre-open and normal market is sent in level 2 feed through this message.

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Code	SHORT	'PN' 'FN'	'PN' = Pre-open session updates 'FN' = Normal market updates
Length	SHORT	Numeric	Size of (INFO HEADER + INFO DATA + INFO TRAILER)
Sequence Number	LONG	Numeric	Application sequence number
INFO DATA			
Instrument Type	CHAR [6]	Character	'FUTSTK' - Stock Futures 'OPTSTK' - Stock Options 'FUTIDX' - Index futures 'OPTIDX' - Index Options 'FUTINT' - Interest Futures 'UNDINT' - Interest Underlying
Symbol	CHAR [10]	Character	This field contains the symbol of contract.
Expiry Date	CHAR [11]	Character	Expiry date indicates the last day till which a particular contract is available for trading. Expiry date in number of seconds elapsed from midnight 01-Jan-1980
Strike Price	CHAR [10]	Character	The value will be in paisa for Options, and the value will be '-1' for Futures contracts
Option Type	CHAR [2]	Character	Describes the option type for option contracts. 'CA' – Call American 'CE' – Call European 'PE' – Put European 'PA' – Put American 'A' indicates American option on which settlement can be done on any day till the expiry day. 'E' indicates European option for which settlement can be done only on expiry day. It will be 'XX' for Futures contracts.

Market Type	CHAR [1]	Character	'N'=Normal 'O'=Odd lot 'S'=Spot 'A'=Auction
Timestamp	CHAR [11]	Character	Time expressed as seconds since 01-01-1970 00:00:00 (Epoch time).
5 Depth Buy order details	MARKET_DEPTH_BUY_ORDER_INFO [5]	Structure	Refer the table given below MARKET_DEPTH_BUY_ORDER_INFO [5]
5 Depth Sell order details	MARKET_DEPTH_SELL_ORDER_INFO [5]	Structure	Refer the table given below MARKET_DEPTH_SELL_ORDER_INFO [5]
Last Traded Price (LTP)	CHAR [10]	Character	This represents the last traded price for contract. In the absence of any trade during the day, the system will default to the previous day's last traded price; if unavailable, the base price is applied.
Total Traded Quantity (TTQ)	CHAR [12]	Character	Represents the aggregate quantity of a contract traded on the current day. TTQ = Number of Contracts Traded * Lot Size
Contract Status	CHAR [1]	Character	'S' = Suspended ' ' = Non-suspended
Opening Price	CHAR [10]	Character	Contract's opening price for the day.
High Price	CHAR [10]	Character	Contract's high price for the day
Low Price	CHAR [10]	Character	Contract's low price for the day
Close Price	CHAR [10]	Character	Contract's close price: During trading previous day's close price is sent. After the market closes, current day's close price is calculated and sent through this field
Average Trade Price	CHAR [10]	Character	Contract's weighted average price i.e. value / quantity

Total Buy Quantity	CHAR [12]	Character	Total quantity of the outstanding orders available on buy side
Total Sell Quantity	CHAR [12]	Character	Total quantity of the outstanding orders available on sell side
Total Turnover	CHAR [25]	Character	Contract's traded value i.e. Average Trade Price * TTQ
INFO TRAILER			
Checksum	SHORT	Numeric	Refer to section checksum calculation
End Of Trailer	CHAR [1]	'\r'	Carriage Return

MARKET_DEPTH_BUY_ORDER_INFO [5]

Field Name	Data Type	Value	Brief Description
MARKET_DEPTH_BUY_ORDER_INFO [5]			
Best Buy-Order price	CHAR [10]	Character	Best 5 buy side's outstanding orders price, quantity. In the case of PN packets the best 4 buy side's outstanding orders price and quantity information is sent. In the 5th price and quantity field buy side's ATO orders information is sent. During Preopen order collection period (till pre-open end), if ATO order exists then in Price field '0.00' will be sent in the last row of buy side.
Best Buy-Order Quantity	CHAR [12]	Character	

MARKET_DEPTH_SELL_ORDER_INFO [5]

Field Name	Data Type	Value	Brief Description
MARKET_DEPTH_SELL_ORDER_INFO [5]			
Best Sell-Order price	CHAR [10]	Character	Best 5 sell side's outstanding orders price, quantity. In the case of PN packets the best 4 sell side's outstanding orders price and quantity information is sent. In the 5th price and quantity field sell side's ATO orders information is sent. During Preopen order collection period (till pre-open end), if ATO order exists then in price field '0.00' will be sent in the last row of sell side.
Best Sell-Order Quantity	CHAR [12]	Character	

3.6 Online - Spread Contract Update Information

NSE spread contract update information is sent in level 1 feed through this message.

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Code	SHORT	'FP'	
Length	SHORT	Numeric	Size of (INFO HEADER + INFO DATA + INFO TRAILER)
Sequence Number	LONG	Numeric	Application sequence number
INFO DATA			
Instrument Type 1	CHAR [6]	Character	Instrument Type of contract 1: 'FUTSTK' - Stock Futures 'OPTSTK' - Stock Options 'FUTIDX' - Index futures 'OPTIDX' - Index Options 'FUTINT' - Interest Futures 'UINDINT' - Interest Underlying
Symbol 1	CHAR [10]	Character	Symbol of contract 1: This field contains the symbol of contract.
Expiry Date 1	CHAR [11]	Character	Expiry Date of contract 1: Expiry date indicates the last day till which a particular contract is available for trading. Expiry date in number of seconds elapsed from midnight 01-Jan-1980
Strike Price 1	CHAR [10]	Character	Strike Price of contract 1: The value will be in paisa for Options, and the value will be '-1' for Futures contracts
Option Type 1	CHAR [2]	Character	Option Type of contract 1: Describes the option type for option contracts. 'CA' – Call American 'CE' – Call European 'PE' – Put European 'PA' – Put American 'A' indicates American option on which settlement can be done on any day till the expiry day. 'E' indicates European option for which settlement can be done only on expiry day. It will be 'XX' for Futures contracts

Commented [AT1]: Remove '_' and add space field name and add the contract 1 or 2 as per the field name

Instrument Type 2	CHAR [6]	Character	Instrument Type of contract 2: 'FUTSTK' - Stock Futures 'OPTSTK' - Stock Options 'FUTIDX' - Index futures 'OPTIDX' - Index Options 'FUTINT' - Interest Futures 'UNDINT' - Interest Underlying
Symbol 2	CHAR [10]	Character	Symbol of contract 2: This field contains the symbol of contract.
Expiry Date 2	CHAR [11]	Character	Expiry Date of contract 2: Expiry date indicates the last day till which a particular contract is available for trading. Expiry date in number of seconds elapsed from midnight 01-Jan-1980
Strike Price 2	CHAR [10]	Character	Strike Price of contract 2: The value will be in paisa for Options, and the value will be '-1' for Futures contracts
Option Type 2	CHAR [2]	Character	Option Type of contract 2: Describes the option type for option contracts. 'CA' – Call American 'CE' – Call European 'PE' – Put European 'PA' – Put American 'A' indicates American option on which settlement can be done on any day till the expiry day. 'E' indicates European option for which settlement can be done only on expiry day. It will be 'XX' for Futures contracts
Timestamp	CHAR [11]	Character	Time expressed as seconds since 01-01-1970 00:00:00 (Epoch time).
Best Buy-Order Price-1	CHAR [10]	Character	Best buy side's outstanding orders price & quantity information of contract 1
Best Buy-Order Quantity-1	CHAR [12]	Character	
Best Sell-Order Price-1	CHAR [10]	Character	Best sell side's outstanding orders price & quantity information of contract 1
Best Sell-Order Quantity-1	CHAR [12]	Character	
Last Traded Price Difference (LTP)	CHAR [10]	Character	Price differences of the latest spread trade.

Total Traded Quantity (TTQ)	CHAR [12]	Character	Represents the aggregate quantity of a contract traded on the current day. TTQ = Number of Contracts Traded * Lot Size
Opening Price Difference	CHAR [10]	Character	Price difference of the first spread trade of the day.
Day High Price Difference	CHAR [10]	Character	Maximum price difference of spread trades during the day.
Day Low Price Difference	CHAR [10]	Character	Minimum price difference of spread trades during the day
INFO TRAILER			
Checksum	SHORT	Numeric	Refer to section checksum calculation
End Of Trailer	CHAR [1]	'\r'	Carriage Return

3.7 Online – Spread Contract 5 Depth Update

NSE 5 depth spread contract update information is sent in level 2 feed through this message.

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Code	SHORT	'FP'	
Length	SHORT	Numeric	Size of (INFO HEADER + INFO DATA + INFO TRAILER)
Sequence Number	LONG	Numeric	Application sequence number
INFO DATA			
Instrument Type 1	CHAR [6]	Character	Instrument Type of contract 1: 'FUTSTK' - Stock Futures 'OPTSTK' - Stock Options 'FUTIDX' - Index futures 'OPTIDX' - Index Options 'FUTINT' - Interest Futures 'UNDINT' - Interest Underlying
Symbol 1	CHAR [10]	Character	Symbol of contract 1: This field contains the symbol of contract.
Expiry Date 1	CHAR [11]	Character	Expiry Date of contract 1: Expiry date indicates the last day till which a particular contract is available for trading. Expiry date in number of seconds elapsed from midnight 01-Jan-1980
Strike Price 1	CHAR [10]	Character	Strike Price of contract 1: The value will be in paisa for Options, and the value will be '-1' for Futures contracts
Option Type 1	CHAR [2]	Character	Option Type of contract 1: Describes the option type for option contracts. 'CA' – Call American 'CE' – Call European 'PE' – Put European 'PA' – Put American 'A' indicates American option on which settlement can be done on any day till the expiry day. 'E' indicates European option for which settlement can be done only on expiry day. It will be 'XX' for Futures contracts

Commented [AT2]: Repeat the same as mentioned in above structure "Online - Spread Contract Update Information"

Instrument Type 2	CHAR [6]	Character	Instrument Type of contract 2: 'FUTSTK' - Stock Futures 'OPTSTK' - Stock Options 'FUTIDX' - Index futures 'OPTIDX' - Index Options 'FUTINT' - Interest Futures 'UNDINT' - Interest Underlying
Symbol 2	CHAR [10]	Character	Symbol of contract 2: This field contains the symbol of contract.
Expiry Date 2	CHAR [11]	Character	Expiry Date of contract 2: Expiry date indicates the last day till which a particular contract is available for trading. Expiry date in number of seconds elapsed from midnight 01-Jan-1980
Strike Price 2	CHAR [10]	Character	Strike Price of contract 2: The value will be in paisa for Options, and the value will be '-1' for Futures contracts
Option Type 2	CHAR [2]	Character	Option Type of contract 2: Describes the option type for option contracts. 'CA' – Call American 'CE' – Call European 'PE' – Put European 'PA' – Put American 'A' indicates American option on which settlement can be done on any day till the expiry day. 'E' indicates European option for which settlement can be done only on expiry day. It will be 'XX' for Futures contracts
Timestamp	CHAR [11]	Character	Time expressed as seconds since 01-01-1970 00:00:00 (Epoch time).
5 Depth Buy Order details	SPREAD_MARKET_DEPTH_BUY_ORDER_INFO [5]	Structure	Refer to the table given below SPREAD_MARKET_DEPTH_BUY_ORDER_INFO
5 Depth Sell Order details	SPREAD_MARKET_DEPTH_SELL_ORDER_INFO [5]	Structure	Refer to the table given below SPREAD_MARKET_DEPTH_SELL_ORDER_INFO

Last Traded Price Difference (LTP)	CHAR [10]	Character	This field contains price difference of the latest spread trade.
Total Traded Quantity (TTQ)	CHAR [12]	Character	Represents the aggregate quantity of a contract traded on the current day. TTQ = Number of Contracts Traded * Lot Size
Opening Price Difference	CHAR [10]	Character	This field contains price difference of the first spread trade of the day.
Day High Price Difference	CHAR [10]	Character	This field contains maximum price difference of spread trades during the day.
Day Low Price Difference	CHAR [10]	Character	This field contains minimum price difference of spread trades during the day
Total Buy Quantity	CHAR [12]	Character	This field contains the total quantity of buy orders in a contract.
Total Sell Quantity	CHAR [12]	Character	This field contains the total quantity of sell orders in a contract.
INFO TRAILER			
Checksum	SHORT	Numeric	Refer to section checksum calculation
End Of Trailer	CHAR [1]	‘\r’	Carriage Return

SPREAD_MARKET_DEPTH_BUY_ORDER_INFO [5]

Field Name	Data Type	Value	Brief Description
SPREAD_MARKET_DEPTH_BUY_ORDER_INFO [5]			
Best Buy-Order price	CHAR [10]	Character	Best 5 buy side's outstanding orders price, quantity
Best Buy-Order Quantity	CHAR [12]	Character	

SPREAD_MARKET_DEPTH_SELL_ORDER_INFO [5]

Field Name	Data Type	Value	Brief Description
SPREAD_MARKET_DEPTH_SELL_ORDER_INFO [5]			
Best Sell-Order price	CHAR [10]	Character	Best 5 sell side's outstanding orders price, quantity.
Best Sell-Order Quantity	CHAR [12]	Character	

3.8 Online – CAS Reference Price Update

These packets consist of messages sent for the broadcast of reference price of stock future contracts.

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Code	SHORT	'FR'	
Length	SHORT	Numeric	Size of (INFO HEADER + INFO DATA + INFO TRAILER)
Sequence Number	LONG	Numeric	Application sequence number
INFO DATA			
Token Number	CHAR [10]	Character	Each token number is unique, and it indicates a unique contract.
Instrument Type	CHAR [6]	Character	'FUTSTK' - Stock Futures 'OPTSTK' - Stock Options 'FUTIDX' - Index futures 'OPTIDX' - Index Options 'FUTINT' - Interest Futures 'UNDINT' - Interest Underlying
Symbol	CHAR [10]	Character	This field contains the symbol of contract.
Expiry Date	CHAR [11]	Character	Expiry date indicates the last day till which a particular contract is available for trading. Expiry date in number of seconds elapsed from midnight 01-Jan-1980
Strike Price	CHAR [10]	Character	The value will be in paisa for Options, and the value will be '-1' for Futures contracts
Option Type	CHAR [2]	Character	Describes the option type for option contracts. 'CA' – Call American 'CE' – Call European 'PE' – Put European 'PA' – Put American 'A' indicates American option on which settlement can be done on any day till the expiry day. 'E' indicates European option for which settlement can be done only on expiry day. It will be 'XX' for Futures contracts.

Reference Price	CHAR [10]	Character	The reference price of a stock future contract shall be determined based on the VWAP of the trades executed in the stock future from 3:00 p.m. to 3:15 p.m. If no trade is executed in the stock future from 3:00 p.m. to 3:15 p.m., LTP of the stock future during the day shall be taken as reference price. In case there is no trade during the day, prevailing theoretical price (based on cash market LTP at 3:15 p.m.) of the stock future shall be taken as the reference price. In case underlying security in cash market is not traded i.e. LTP is not available, base price of the respective future contract shall be taken as reference price.
INFO TRAILER			
Checksum	SHORT	Numeric	Refer to section checksum calculation
End Of Trailer	CHAR [1]	'\r'	Carriage Return

3.9 EOD – Master Addition/Modification/Deletion

This packet consists of information about addition, modification, or deletion of any of the contracts. After market close, this information is disseminated to client as the "End of Day" (EOD) feed.

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Code	SHORT	'FA' 'FM' 'FD'	'FA' = Contract added 'FM' = Contract modified 'FD' = Contract deleted
Length	SHORT	Numeric	Size of (INFO HEADER + INFO DATA + INFO TRAILER)
Sequence Number	LONG	Numeric	Application sequence number
INFO DATA			
Instrument	CHAR [6]	Character	'FUTSTK' - Stock Futures 'OPTSTK' - Stock Options 'FUTIDX' - Index futures 'OPTIDX' - Index Options 'FUTINT' - Interest Futures 'UNDINT' – Interest Underlying
Symbol	CHAR [10]	Character	This field contains the symbol of contract.
Expiry Date	CHAR [11]	Character	Expiry date indicates the last day till which a particular contract is available for trading. Expiry date in number of seconds elapsed from midnight 01-Jan-1980
Strike Price	CHAR [10]	Character	The value will be in paisa for Options, and the value will be '-1' for Futures contracts
Option Type	CHAR [2]	Character	Describes the option type for option contracts. 'CA' – Call American 'CE' – Call European 'PE' – Put European 'PA' – Put American 'A' indicates American option on which settlement can be done on any day till the expiry day. 'E' indicates European option for which settlement can be done only on expiry day. It will be 'XX' for Futures contracts

Contract Description	CHAR [30]	Character	Contract Name
Regular Lot	CHAR [6]	Character	Standard number of units per FO contract (Lot Size)
Market Type	CHAR [1]	Character	'N' = Normal 'S' = Spot 'O' = Odd Lot 'A' = Auction
Tick Size	CHAR [6]	Character	Tick size of a contract.
Maturity Date	CHAR [11]	Character	Contract Maturity Date (DD-MON-YYYY)
Last Update Date & Time	CHAR [20]	Character	Format: DD-MON-YYYY HH:MM:SS
INFO TRAILER			
Checksum	SHORT	Numeric	Refer to section checksum calculation
End Of Trailer	CHAR [1]	'\r'	Carriage Return

3.10 EOD – Market Status

The end-of-day status of the contracts is sent through these messages. After market close, this information is disseminated to client as the "End of Day" (EOD) feed.

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Code	SHORT	'FS'	
Length	SHORT	Numeric	Size of (INFO HEADER + INFO DATA + INFO TRAILER)
Sequence Number	LONG	Numeric	Application sequence number
INFO DATA			
Instrument	CHAR [6]	Character	'FUTSTK' - Stock Futures 'OPTSTK' - Stock Options 'FUTIDX' - Index futures 'OPTIDX' - Index Options 'FUTINT' - Interest Futures 'UNDINT' - Interest Underlying
Symbol	CHAR [10]	Character	This field contains the symbol of contract.
Expiry Date	CHAR [11]	Character	Expiry date indicates the last day till which a particular contract is available for trading. Expiry date in number of seconds elapsed from midnight 01-Jan-1980
Strike Price	CHAR [10]	Character	The value will be in paisa for Options, and the value will be '-1' for Futures contracts
Option Type	CHAR [2]	Character	Describes the option type for option contracts. 'CA' – Call American 'CE' – Call European 'PE' – Put European 'PA' – Put American 'A' indicates American option on which settlement can be done on any day till the expiry day. 'E' indicates European option for which settlement can be done only on expiry day. It will be 'XX' for Futures contracts

Market Type	CHAR [1]	Character	'N' = Normal 'O' = Odd lot 'S' = Spot 'A' = Auction
Opening Price	CHAR [10]	Character	Contract's opening price for the day
Trade High Price	CHAR [10]	Character	Contract's high price for the day
Trade Low Price	CHAR [10]	Character	Contract's low price for the day
Closing Price	CHAR [10]	Character	Contract's close price for the day
Last Traded Price (LTP)	CHAR [10]	Character	This represents the last traded price for contract. In the absence of any trade during the day, the system will default to the previous day's last traded price; if unavailable, the base price is applied.
Previous Close Price	CHAR [10]	Character	Contract's previous day's close price
Settlement Price	CHAR [10]	Character	Contract's settlement price
Total Traded Quantity	CHAR [12]	Character	Represents the aggregate quantity of a contract traded on the current day. TTQ = Number of Contracts Traded * Lot Size
Total Traded Value	CHAR [25]	Character	Contract's total traded value for the day
Open Interest	CHAR [12]	Character	Total number of outstanding contracts not yet closed or settled.
Change In Open Interest	CHAR [12]	Character	Contract's open interest change
INFO TRAILER			
Checksum	SHORT	Numeric	Refer to section checksum calculation
End Of Trailer	CHAR [1]	'\r'	Carriage Return

3.11 BOD & EOD Checksum Information

This message gives information about the number of messages (i.e. count) sent for each BOD & EOD message. This message will be sent multiple times a day. (i.e. After complete dissemination of any BOD/ EOD messages this message will be sent.)

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Code	SHORT	'FZ'	
Length	SHORT	Numeric	Size of (INFO HEADER + INFO DATA + INFO TRAILER)
Sequence Number	LONG	Numeric	Application sequence number
INFO DATA			
Data Code	SHORT	'FT'/ 'FA'/ 'FM'/ 'FD'/ 'FS'	Message code for which the count is sent
Messages Count	CHAR [10]	Character	Message count for the Data Code
INFO TRAILER			
Checksum	SHORT	Numeric	Checksum is not calculated, so it is sent as 0(Zero)
End Of Trailer	CHAR [1]	'\r'	Carriage Return

3.12 EOD – End of Feed Information

This packet marks the completion of all components of the End-of-Day (EOD) feed. It is transmitted only once through the feed. Upon receiving this message, clients may safely terminate their applications, as no further update information will be sent from the server.

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Code	SHORT	'FE'	
Length	SHORT	Numeric	Size of (INFO HEADER + INFO TRAILER)
Sequence Number	LONG	Numeric	Application sequence number
INFO DATA			
Not associated with any data			
INFO TRAILER			
Checksum	SHORT	Numeric	Checksum is not calculated, so it is sent as 0 (Zero)
End Of Trailer	CHAR [1]	'\r'	Carriage Return

3.13 Heartbeat Message

Commented [AT3]: Delete section 3 and put the heart message in section 4 before or after end of feed structure

Heartbeat message will be sent every 2 seconds if data is not available.

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Code	SHORT	'FH'	
Length	SHORT	Numeric	Size of (INFO HEADER + INFO TRAILER)
Sequence Number	LONG	Numeric	0 (Zero) for heartbeat message
INFO DATA			
Not associated with any data			
INFO TRAILER			
Checksum	SHORT	Numeric	Checksum is not calculated, so it is sent as 0 (Zero)
End Of Trailer	CHAR [1]	'\r'	Carriage Return

4 Steps for Decompressing the Data Packets

4.1 LZO Algorithm Details

The LZO stands for Lempel Ziv Oberhaumer. It is a data compression library which is suitable for data Decompression in real-time. This means it favors speed over compression ratio.

LZO is written in ANSI C. Both the source code and the compressed data format are designed to be portable across platforms. This algorithm is freely available on the internet (URL: https://www.oberhumer.com/opensource/lzo/). It is made available by free software foundation. The algorithm is tested on various operating systems like UNIX and Red Hat Linux.

LZO implements several algorithms with the following features

- Decompression is simple and very fast.
- Requires no memory for decompression.
- Requires 64 KB of memory for compression.
- Allows you to dial up extra compression at a speed cost in the compressor.
- The speed of decompression is not reduced.
- Includes compression levels for generating pre-compressed data which achieve a quite competitive compression ratio.
- There is also a compression level which needs only 8 KB for Compression.
- Algorithms are thread safe.
- Algorithms are lossless.
- LZO supports overlapping compression and in-place decompression.

4.2 Files required for LZO algorithm

- Include files, source files (src) provided by LZO
- LZO.lib
- LZO library version used is 1.0.7

4.3 Decompression steps

Receive the packet in the temporary buffer i.e. an array of characters.
The first field is compressed or decompressed.
The second field is the number of packets in the following data packet.
The third field is data packet length.
Use the following function of LZO to Decompress.

r = lzo1z_decompress ((lzo_byte*)cInputBuf, ipLength, (lzo_byte*)cOutputBuf, (lzo_uint*)&opLength, NULL);

lzo1z_decompress: Function which decompresses the data packet received
cInputBuf: Input buffer in which compressed data is received.
ipLength: The length of the packet which application has received using Receive ().
cOutputBuf: The uncompressed output data which is result of decompression.
opLength: Length of uncompressed data

After decompression data will be available in Output Buffer.

Each output data packet contains the INFO HEADER, after mapping the output decompressed buffer to INFO HEADER find out the data packet and the according to it map the output buffer to respective data packet.

Algorithm:

```
ST_NIFO_HEADER *pstInfoHeader;

for (i=0; i < iNoOfPackets; i++)            // iNoOfPackets received in
                                            // compressed data header
{
        pstInfoHeader = (ST_NIFO_HEADER   *) cOutputBuf

        switch (pstInfoHeader->iCode)
                {
                        case CB:        //Broadcast Message
                        {
                                ST_INDEX_DATA*stIndexData = (ST_INDEX_DATA *)cOutputBuf;
                                .
                                .
                                cOutputBuf = cOutputBuf +
                                sizeof(ST_INDEX_DATA); break;
                        }
                }
```

5 Checksum Calculation Algorithm

The Checksum routine followed for Info Vendor Feed is as follows:

```
// Following is the defines for checksum calculation

#define DC1          17
#define DC3          19
#define CR           13
#define LF           10
#define POLY      0x1021

// End of defines
check_sum (cData, iLength) char *cData;
int iLength;
{
        unsigned uAccum = 0;
        unsigned uData;
        unsigned char ucChk[2];
        int i,j;
        for (i=0;i<iLength;i++)
        {
                uData = *(cData+i);
                uData <<= 8;
                for(j=8; j>0 ;j--)
                {
                        if((uData^uAccum)&0x8000)
                                uAccum=(uAccum<<1)^POLY;
                        /* SHIFT AND SUBTRACT POLY */
                        else
                                uAccum<<=1;
                        uData<<=1;
                }
        }

        ucChk[0] = uAccum>>8;
        if (ucChk[0] == DC1 || ucChk[0] == DC3 || ucChk[0] == CR || ucChk[0] == LF )
                ucChk[0] -= 1;

        ucChk[1] = uAccum&0xFF;
        if (ucChk[1] == DC1 || ucChk[1] == DC3 || ucChk[1] == CR || ucChk[1] == LF )
                ucChk[1] -= 1;

        uAccum = ucChk[1];
        uAccum = (uAccum<<8) + ucChk[0];

        return(uAccum);
}
```

6 Notes

In index and stock futures the contract descriptor comprises of Symbol, Expiry Date while for index and stock options the contract descriptor comprises of Symbol, Expiry Date, Strike Price & Option Type.

6.1 Pre-Open Session

Pre-open session will be conducted for the Normal Market segment. The session will be conducted before the normal market start time. Exchange may decide to allow all or selective contracts in pre-open session.
During the Pre-open session, only order entry, orders modification and order cancellation will be allowed. Once the pre-open session ends, no order activity will be allowed and the final open price (i.e. equilibrium price based on accumulated buy and sell orders) will be computed. Pre-open orders will be matched at this final open price resulting in trade execution.
Pre-open orders that could not participate in the pre-open matching for reasons such as a demand-supply gap, order price worse than the equilibrium price etc. shall be carried forward to the normal market. The time priority of such orders shall be retained.
In the above context NSE – Market Feed (Level 1 & Level 2) product sends messages in the following sequence.

1. Pre-open session start (PO) – market type 'N'
2. Contract Update Information (PN) – Indicative open price in open price field
3. Pre-open session end (PC) - market type 'N'
4. Contract Update Information (PN) – Derived final open price in open price field and current contract information
5. Normal Market open (FO) - market type 'N'
6. Contract Update Information (FN) – With current contract
7. Normal Market Close (FC) - market type 'N'

6.2 Closing Auction Session

Closing Auction session applies only to the equity segment. To keep the applicable price band aligned between Equity and Equity Derivative segments, the price band for stock futures will be reset before CAS.
The price band for all stock futures contracts will be set at ±3% of the reference price computed post 3:15 p.m. during normal market hours.
The equity derivatives segment timings will be extended until 3:40 PM and it is applicable for both index and stock derivatives contracts.

7 Contract Name Mapping Example

In FT messages four new fields are added and one of the fields is **"Contract Name"**

Examples of weekly & monthly options contracts will reflect in the contract name field as follows

Options, monthly and weekly contracts examples

Contract Name	Tenor	Logic for contract Name					
FINNIFTY22JAN15900PE	Monthly	Symbol	YY	MON	Strike Price	Option Type	
NIFTY22JAN19450CE	Monthly	Symbol	YY	MON	Strike Price	Option Type	
FINNIFTY21D2122200PE	Weekly	Symbol	YY	M	DD	Strike Price	Option Type
NIFTY21D2316700CE	Weekly	Symbol	YY	M	DD	Strike Price	Option Type

Futures monthly and weekly contracts examples

Contract Name	Tenor	Logic for contract Name				
FINNIFTY22JANFUT	Monthly	Symbol	YY	MON	Instrument Type	
NIFTY22JANFUT	Monthly	Symbol	YY	MON	Instrument Type	
FINNIFTY21D21FUT	Weekly	Symbol	YY	M	DD	Instrument Type

Where YY – Year, MON – Month, M – Month, DD - Date

Below is the Table of codes for months ‘M’ in weekly options contracts

Sr. No.	Month ‘M’	Code
1	January	1
2	February	2
3	March	3
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	O
11	November	N
12	December	D

8 Annexure

8.1 Acronyms Used

BOD	Begin Of Day Information
EOD	End Of Day Information
ONLINE	Information Sent During Market Timing
CM	Cash Market
F&O	Future & Options Market
CD	Currency Derivatives Market
WDM	Wholesale & Debt Market
COM	Commodity Market
CBRICS	Corporate Bond Reporting and Integrated Clearing System
RFQ	Request For Quote
NSE IX	NSE International Exchange
MTBT	Multicast Tick By Tick
LTP	Last Traded Price
ATO	At The Opening
TTQ	Total traded Quantity
BSE	Bombay Stock Exchange
LTQ	Last Traded Quantity
EGR	Electronic Gold Receipts
CAS	Closing Auction Session
VWAP	Volume Weighted Average Price

9 FAQs

1) For Sequenced Data Messages, why are fields defined with a data type of short while the value is specified as a character?

   The data sent by the server consists of numeric values that represent the ASCII codes of the corresponding characters. At the client end, these ASCII values need to be converted into their respective character representations.

2) How can numeric and non-numeric values be identified?

   Numeric values are always right-aligned, while non-numeric values are left-aligned. For example, although LTP is defined with a character data type, it is identified as a numeric value based on its right alignment.

3) What is Level 1 and Level 2 Data?

   The list of market depth is organized by price levels, and it is updated in real-time to reflect current activity where:

   - Level 1 provides the best Bid and best Ask price.
   - Level 2 offers up to the best 5 Bids and Asks prices.

4) What structures are available for level 1 and level 2 feeds?

Packets Sent	Code	Level 1	Level 2
3.1 BOD - Master Information	'FT'	✔	✔
3.2 Online - Market Status Message	'PO' 'PC' 'FO' 'FC'	✔	✔
3.3 Online – Open Interest Information	'FI'	✔	✔
3.4 Online – Normal Market Contract Update Information	'PN' 'FN'	✔	-
3.5 Online – Normal Market Contract 5 Depth Update	'PN' 'FN'	-	✔
3.6 Online – Spread Contract Update Information	'FP'	✔	-
3.7 Online – Spread Contract 5 Depth Update	'FP'	-	✔
3.8 Online – CAS Reference Price Update	'FR'	✔	✔
3.9 EOD – Master Addition/Modification/Deletion	'FA' 'FM' 'FD'	✔	✔
3.10 EOD – Market Status	'FS'	✔	✔
3.11 BOD & EOD Checksum Information	'FZ'	✔	✔
3.12 EOD – End of Feed Information	'FE'	✔	✔
3.13 Heartbeat Message	'FH'	✔	✔

5) How is Contract Tick Size to be interpreted?

   In Real Time FT (BOD – Master Information) packet, Tick Size is in paise.
   While in EOD – Master Addition/Modification/Deletion, Tick Size is in INR.

6) Can we use lzo versions 2.03/2.09/2.10 for decompressing the packets received from NDAL?

   Yes, lzo is backward compatible. Above versions of lzo can be used for decompressing the compressed packets disseminated from NDAL.

7) How does an ATO order execute during pre-open session?

   During the pre-open order collection period, the Level 2 message displays the top four buy and sell rows as limit orders. The fifth row on both sides is specifically reserved for ATO (At The Opening) orders. If an ATO order is present, the price field in the last row will contain a value of **-0.01** for both buy and sell sides.
   This format applies to Level 2 messages, which present five bid and ask prices.

8) Will all the futures & options contracts for Indices and stock be available during preopen session?

   No, the pre-open session is only applicable to current month futures contracts for both stocks and indices. However, during the last five trading days before the current month's expiry, the pre-open session is also extended to include next-month futures contracts.
   Illustration:
   Suppose the current month (M1) futures contract expires on 30-DEC-2025 and the next month (M2) contract expires on 27-JAN-2026. The applicability of the pre-open session would be as follows:

Trading Date	***M1 – Expiry 30DEC2025***	***M2 - Expiry 27JAN2026***
	Pre-Open Session Applicability	
01-DEC-2025 to 21-DEC-2025	*Yes*	*No*
22-Dec-2025	*Yes*	*No*
23-Dec-2025	*Yes*	*Yes*
24-Dec-2025	*Yes*	*Yes*
25-DEC-2025	*Holiday*	*Holiday*
26-DEC-2025	*Yes*	*Yes*
27-Dec-2025	*Holiday*	*Holiday*
28-DEC-2025	*Holiday*	*Holiday*
29-DEC-2025	*Yes*	*Yes*
30-DEC-2025 - Expiry Day	*Yes*	*Yes*

Trading Date	***M1 – Expiry 27JAN2026***	***M2 – Expiry 24FEB2026***
	Pre-Open Session Applicability	
31-Dec-2025	*Yes*	*No*

   **Please note M1 & M2 contract represent all the stocks and Indices future contracts.

   Pre-open session shall not be applicable in following scenarios:

- *Spread & Option contracts on Indices and stocks.*
- *Pre-open session shall not be conducted in Futures of underlying contract on its ex-date of corporate action due to scheme of arrangement.*

9) How to identify BSE listed contracts?

BSE exclusive contracts shall have "$" suffixed in the associated symbol field at NSE. Below are the examples.

Contract Name	Expiry Date	Strike Price	Option Type	Contract Description
Options Contracts				
NSDL$	26APR2026	143000	PE	NSDL26APR1430PE
REGAL$	26APR2026	143000	CE	REGAL26APR1430CE
BLUEJACK$$	26APR2026	143000	CE	BLUEJACK$26APR1430CE
Futures Contract				
BLUEJAC$$$	26APR2026	-	XX	BLUEJAC$$26APRFUT

Please note that examples provided are for illustration purposes only.

All symbol fields in applicable packets in Sequenced Data Message section shall contain BSE exclusive contracts along with NSE contracts.

10 Support Information

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