MARKET FEED
Capital Market (CM)
(15 Mins Delayed Snapshot)

Version: 1.28

Date: 09 February 2026

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EXCHANGE PLAZA,
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Revision History

Name	Description	Date
Version 1.0	New Specification Issued	06 November 2015
Version 1.1	10 New Indices Addition and Indices Rename Change	08 March 2016
Version 1.2	Addition of 4 New Indices	31 January 2018
Version 1.3	Index Renamed	22 March 2018
Version 1.4	Index Renamed	03 July 2018
Version 1.5	Addition of 5 New Indices	04 January 2019
Version 1.6	Addition of 2 New Indices	06 August 2020
Version 1.7	Addition of 2 New Indices	30 September 2020
Version 1.8	Addition of 5 New Indices	03 August 2021
Version 1.9	Field Name changed from Warning Percent to Settlement Cycle in Security Information	21 December 2021
Version 1.10	Addition of 7 new indices	09 January 2022
Version 1.11	Added the note regarding Inclusion of Dummy symbols in MBP file	25 November 2022
Version 1.12	Increased token number range from short to long	23 August 2023
Version 1.13	Addition of 2 Dummy Indices	20 October2023
Version 1.14	Addition of 2 New Indices	12 January 2024
Version 1.15	1. Addition in Note of T+0 definition in settlement cycle field for Security information 2. Removal in Note of T+2 definition in settlement cycle field for Security information	18 March 2024
Version 1.16	Addition of 4 New Indices	28 March 2024
Version 1.17	Increased total traded quantity range from long to unsigned long	24 April 2024
Version 1.18	1. Increased range of total traded quantity and interval total traded quantity from unsigned long to long long and from long to long long respectively. 2. Addition of Decoding Snapshot files and addition of Indicative Close Value in Indices Information 3. Increased range of best buy quantity, best sell quantity and indicative traded quantity	29 August 2024

	from long to long long. 4. Addition of Indicative Close Price in Market Information 5. Addition of FAQ Section	
Version 1.19	Addition of 12 New Indices	08 November 2024
Version 1.20	Addition of 32 New Indices	29 November 2024
Version 1.21	1. Removal of .ca1 in call auction market information 2. Addition of BOD - INAV Symbol mapping to NSE Symbol	27 February 2025
Version 1.22	Addition of 3 New Indices	06 March 2025
Version 1.23	Discontinuation of BHARATBOND-APR25 Index	08 April 2025
Version 1.24	1. Added Permitted To Trade field in Security Information 2. Addition of 1 question in FAQs section	28 April 2025
Version 1.25	1. Added the SSEC identifier field to Security Information 2. Added 1 question in FAQs section	05 June 2025
Version 1.26	New Addition Index	09 September 2025
Version 1.27	Addition of 9 New Indices	10 November 2025
Version 1.28	Added 2 new indices and FAQ	09 February 2026

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Market Feed - Capital Market (15 Minutes Snapshot)

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

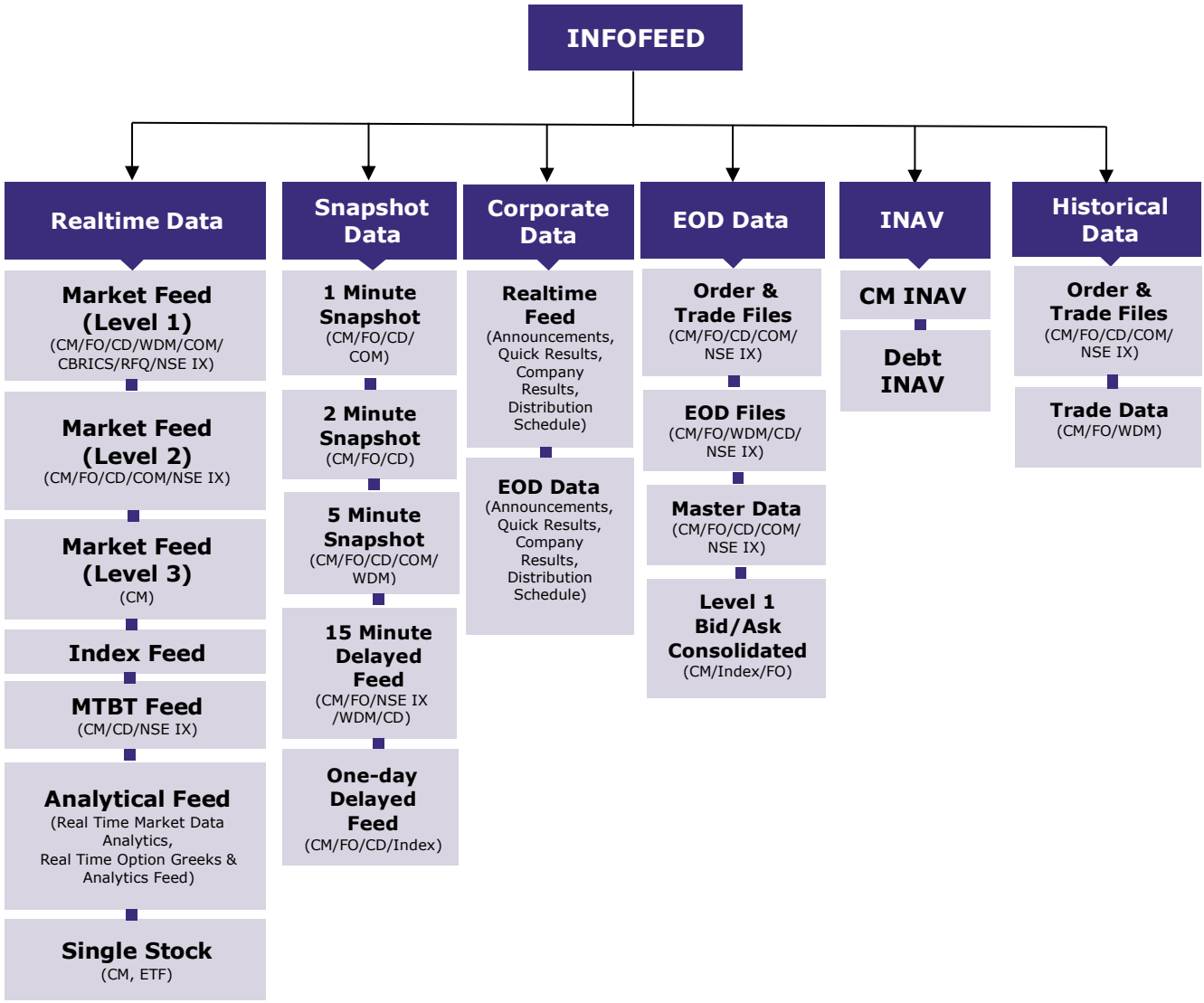
1. End of Day Data
2. Historical Data

The data products are provided through delivery modes mentioned below:

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

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

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



This document explains about the NSE's Capital Market (CM) 15-minute delayed snapshot product. Through this product, binary snapshot files of CM data are generated on the server at one-minute intervals, with a consistent delay of 15 minutes from real-time.

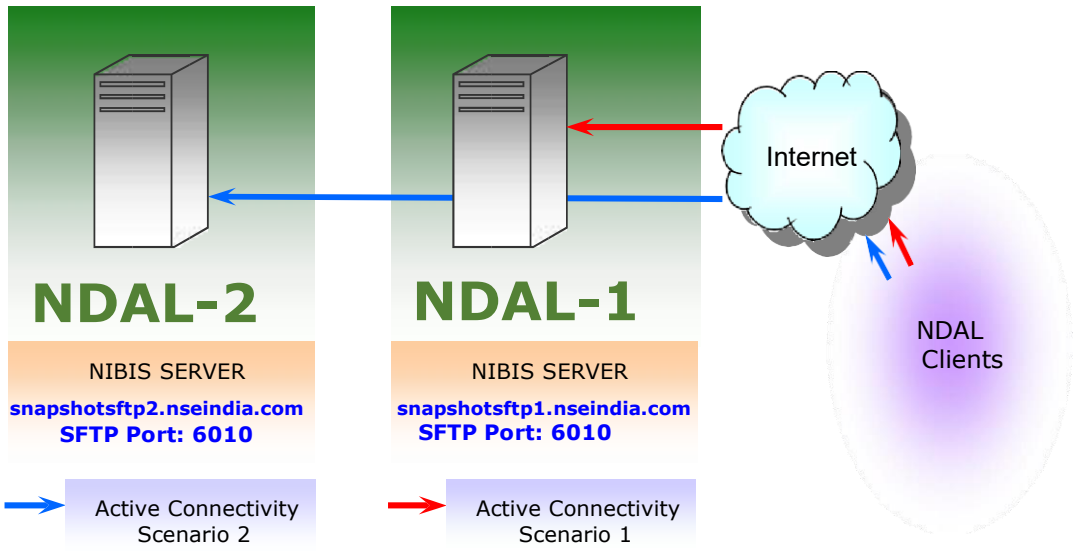
Clients who subscribe to this service connect to the NIBIS (NSE Internet-Based Information System) via the internet and must use the SFTP protocol to download the files. These files are provided in binary format.

To gain access to the NIBIS server, clients are required to submit their server's public key and static public IP address. Once verified, credentials are issued and remain valid for the duration specified in the service agreement.

2. Connection Details

Clients establish a connection to the NIBIS server over the Internet by utilizing the SFTP protocol through a designated public static IP address. Two NIBIS Production Servers operate in an active-active configuration. Each server can be accessed using two IP addresses, for ISP-level redundancy, as shown in the Structural Diagram. In case a server becomes inaccessible through both its IP addresses, the clients are required to fail-over to the other server.

2.1. Structural Diagram



2.2 Data Types

Data Type	Size In Bytes
CHAR	1
SHORT	2
LONG	4
DOUBLE	8
LONG LONG	8

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

2.3 Platform notes

1. The SFTP service can be simultaneously accessed through both redundant IP addresses on each server. This is to enable clients to access the servers in case of link failure.
2. There may be slight differences between the data disseminated by the two servers because of factors impacting sampling such as CPU clock skew, differences in routing of data, etc.
3. Time stamp on the files on the server is in 24-hour format.
4. Certain files are compressed using ZLIB (gzip). The files may be decompressed using the popular "gunzip" command on Unix/Linux systems. Tools to decompress these files are also freely available for Windows on the World Wide Web, Gzip for Windows and 7-Zip being popular examples.
5. The Exchange does not provide software or support for decompression, SFTP, etc.

2.4 SFTP Connection Details

Segment	Server	URL	Port
CM	Primary	snapshotsftp1.nseindia.com	6010
	Secondary	snapshotsftp2.nseindia.com	6010

3. Data Details

The Capital Market (CM) data files are generated in binary format at a regular interval of 1 minute (15 minutes old data). These are *.mkt and *.ind files.

3.1 Market Information

The Market information data files are generated in /CM30/DATA/"<Month>DDYYYY" folder on the server. i.e., *.mkt and *.ind.

3.1.1 Market Files

The *.mkt (Where "*" stands for a numeric value) files contains market statistics and order information of the securities that are being traded 15 minutes before and generated with 1 minute interval along with their open, high, low and close price. The file contains a single record for every security that is traded during that file interval. These files are generated in incremental count number on a trading day starting from 1.mkt.

During special trading session (mahurat trading), the first file will be generated after 15 minutes after the trading session starts. Actual timing circular will be published by the exchange at the appropriate time.

3.1.2 Indices Files

The *.ind (Where "*" stands for a numeric value) files contains NSEIL Indices information along with its open, high, low and close index values. Each file contains data of all indices of Exchange. These files are generated at regular interval of 1 minutes with 15 minutes old data. These files are generated during normal trading period and during Close Session.

3.2. Call Auction Market Information (Call Auction 2)

Multiple sessions of call auction 2 market can be held in a trading day.

The call auction 2 session shall consist of

- Order collection period (Order entry, modification and cancellation is allowed)
- Order matching period.

The computation of Indicative Opening Price (IOP) and matching logic shall be same as pre-open session for Cash Market segment. In call auction market, after matching period is over all the outstanding orders shall be cancelled.

This market consists of SME (Small & Medium Enterprise), IPO & Re-listed and illiquid securities.

The Buy back and market maker concept is not there in the market so the 'BBMM Flag' for buy and sell side will be sent as '0' (zero).
The Call Auction 2 Market information data files are generated on the server with the *.ca2 extension.
The *.ca2 ("*" stands for a number) files contain market statistics and order information of the securities that are being traded in the call auction 2 market in the last 1 minute along with their open, high, low and close price. The file contains a single record for every security that is traded during that file interval. These files are generated during normal trading period. These files are generated in incremental count number on a trading day starting from 1.ca2

For more details, please refer to NSE Circular CMTR23063

3.3. Security Information

The Securities.dat file is the master file that contains the updated information of all securities traded on the Exchange. The security update file is generated in /CM30/SECURITY/"<Month>DDYYYY" folder on the server. The clients need to download this file and decode it to resolve the "token number" of required security. The Token number of each security is unique.

Note: Dummy symbols shall be received in MBP file in an affixed pattern where the last 7 characters shall contain "**NSETEST**". Kindly ignore dummy securities trade volume and pricing information which is coming in MBP file.

4. Data Structure Details

4.1 Market Information

Directory Path	/CM30/DATA/<MonthDDYYYY>
File Name	*.mkt
Compression	Compressed (.gz)
Generation Frequency	At fixed intervals

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Transcode	SHORT	Numeric	Transaction message number. This describes the type of message received or sent.
Timestamp	LONG	Numeric	This field should be set to numeric zero while sending to the host. This is used in host end.
Message Length	SHORT	Numeric	This field should be set to the length of the entire message, including the length of message header while sending to host.
Info Header Length		**8 Bytes**	
INFO DATA			
Security Token	LONG	Numeric	This field contains the token number
Last Traded Price	LONG	Numeric	This field contains the price at which the latest trade in a security has taken place.
Best Buy Quantity	LONG LONG	Numeric	This field contains the total Buy Quantity for the auction
Best Buy Price	LONG	Numeric	The highest price for a Buy auction.
Best Sell Quantity	LONG LONG	Numeric	This field contains the total Sell quantity for the auction
Best Sell Price	LONG	Numeric	This is the lowest price for a Sell auction

Total Traded Quantity	LONG LONG	Numeric	This field contains the total quantity of a security traded on the current day
Average Traded Price	LONG	Numeric	This field contains the average price of all the trades in a security.
Open Price	LONG	Numeric	This field contains the open price of a security
High Price	LONG	Numeric	This field contains the highest trade price.
Low Price	LONG	Numeric	This field contains the lowest trade price.
Close Price	LONG	Numeric	This field contains the closing price of a security.
Interval High Price	LONG	Numeric	This field contains the highest trade price during interval
Interval Low Price	LONG	Numeric	This field contains the lowest trade price during interval
Interval Open Price	LONG	Numeric	This field contains the open price of a security during interval
Interval Close Price	LONG	Numeric	This field contains the closing price of a security during interval
Interval Total Traded Quantity	LONG LONG	Numeric	This field contains the total quantity of a security traded during interval
Indicative Close Price	LONG	Numeric	This field contains indicative close price of a security. It will be sent in last 30 minutes of normal session. Until then this will be sent as 0
Info Data Length		**88 Bytes**	

4.2. Indices Information

Directory Path	/CM30/DATA/<MonthDDYYYY>
File Name	*.ind
Compression	Compressed (.gz)
Generation Frequency	At fixed intervals

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Transcode	SHORT	Numeric	Transaction message number. This describes the type of message received or sent.
Timestamp	LONG	Numeric	This field should be set to numeric zero while sending to the host. This is used in host end.
Message Length	SHORT	Numeric	This field should be set to the length of the entire message, including the length of message header while sending to host.
Info Header Length		**8 Bytes**	
INFO DATA			
Index Token	LONG	Numeric	Token number of the index being updated.
Open Index Value	LONG	Numeric	This field contains the opening index value at the time of market open.
Current Index Value	LONG	Numeric	This field contains the online market index value at that instance of broadcast.
High Index Value	LONG	Numeric	This field contains the day's highest index value at the time of broadcast
Low Index Value	LONG	Numeric	This field contains day's lowest index value at the time of broadcast.

Percentage change in index	LONG	Numeric	This field contains the percent change in current index with respect to yesterday's closing index
Interval High Index Value	LONG	Numeric	This field contains today's high index in interval
Interval Low Index Value	LONG	Numeric	This field contains today's low index in interval
Interval Open Index Value	LONG	Numeric	This field contains the opening index value at interval
Interval Close Index Value	LONG	Numeric	This field contains today's closing index at interval
Indicative Close Value	LONG	Numeric	This field contains the indicative index close value.
Info Data Length		**44 Bytes**	

4.3. Security Information

Directory Path	/CM30/SECURITY/<MonthDDYYYY>
File Name	Securities.dat
Compression	Not compressed
Generation Frequency	Once (EOD)

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Transcode	SHORT	Numeric	Transaction message number. This describes the type of message received or sent.
Timestamp	LONG	Numeric	This field should be set to numeric zero while sending to the host. This is used in host end.
Message Length	SHORT	Numeric	This field should be set to the length of the entire message, including the length of message header while sending to host.
Info Header Length		**8 Bytes**	
INFO DATA			
Token Number	LONG	Numeric	Token number of the security being updated.
Symbol	CHAR [10]	Character	This field contains the Symbol of the security. (BSE exclusive securities shall have "$" suffixed in the symbol)
Series	CHAR [2]	Character	This field contains the series of a security.
Issued Capital	DOUBLE	Numeric	Issue size of the security
Settlement Cycle	SHORT	Numeric	This field contains the period by which settlement between the parties should take place. This value is defaulted by the Exchange and cannot be modified by the user.
Freeze Percent	SHORT	Numeric	This field contains the volume freeze percent with respect to issued capital.

Credit Rating	CHAR [12]	Character	This field contains the credit rating of the security.
Issue Rate	SHORT	Numeric	Price of the issue.
Issue Start Date	LONG	Numeric	Date of issue of the security.
Issue Pdate	LONG	Numeric	Interest payment date
Issue Maturity Date	LONG	Numeric	Maturity date
Board Lot Quantity	LONG	Numeric	Regular lot size.
Tick Size	LONG	Numeric	Tick size/ Min spread size
Name of Company	CHAR [25]	Character	Name of the company
Record Date	LONG	Numeric	Date of record changed.
Expiry Date	LONG	Numeric	This field contains the last date of trading before any corporate action
No Delivery Start Date	LONG	Numeric	Date from when physical delivery of share certificates is stopped for book closure
No Delivery End Date	LONG	Numeric	No delivery end date.
Book Closure Start Date	LONG	Numeric	Date at which the record books in the company for shareholder names start.
Book Closure End Date	LONG	Numeric	Date at which the record books in the company for shareholder names end
SSEC	SHORT	Numeric	This is used as an identifier for different market securities. 0 - Not used. 1 - Securities (except SME) eligible in Normal market and Odd Lot markets 2 – IPO Session is being held security (including SME). 3 – Re-list Session is being held security (including SME). 4 - Illiquid security eligible for Call Auction session (CA2) (including SME). 5 - SME securities eligible in normal market.

Permitted To Trade	CHAR [1]	Character	'0' - Listed but not permitted to trade '1' - Permitted to trade '2' - BSE listed (BSE exclusive security will be available, however trading on the same will be allowed only in case of outage at BSE)
Info Data Length		**114 Bytes**	

Note: Settlement Cycle can have two values; either 0 or 1. Value of 0 means Settlement Cycle of the security is T+0 and 1 means Settlement Cycle of the security is T+1.

4.4 BOD - INAV Symbol mapping to NSE Symbol

This file provides a mapping of security symbol to Indicative NAV (INAV) symbol. It contains data that links the symbol of security to its corresponding INAV symbol

Directory Path	/CM30/SECURITY/<MonthDDYYYY>
File Name	Inav.dat
Compression	Not compressed
Generation Frequency	Once (BOD)

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Transcode	SHORT	Numeric	Transaction message number. This describes the type of message received or sent.
Message Length	SHORT	Numeric	This field should be set to the length of the entire message, including the length of message header while sending to host.
Info Header Length		**4 Bytes**	
INFO DATA			
INAV Symbol	CHAR [10]	Character	Mapped INAV Symbol with Security symbol
Token Number	LONG	Numeric	Token for NSE symbol is Unique identifier for the securities listed on NSE.
Symbol	CHAR [10]	Character	NSE Security symbol for INAV symbol
Info Data Length		**24 Bytes**	

4.5 Call Auction Market Information (Call Auction 2)

Directory Path	/CM30/DATA/<MonthDDYYYY>
File Name	*.ca2: Call Auction Market
Compression	These files are compressed (.gz)
Generation Frequency	At fixed intervals

Field Name	Data Type	Value	Brief Description
INFO HEADER			
Transcode	SHORT	Numeric	Transaction message number. This describes the type of message received or sent.
Timestamp	LONG	Numeric	This field should be set to numeric zero while sending to the host. This is used in host end.
Message Length	SHORT	Numeric	This field should be set to the length of the entire message, including the length of message header while sending to host.
Info Header Length		**8 Bytes**	
INFO DATA			
Security Token	LONG	Numeric	Security Token
Last Traded Price	LONG	Numeric	During order collection as well as during matching, it contains LTP of the security
Best Buy Quantity	LONG LONG	Numeric	Best buy side limit order, price, and quantity information. For BBMM flag refer 9.3 Market Maker & Buy Back Flag (MMBB Flag)
Best Buy Price	LONG	Numeric	
Buy BBMM Flag	CHAR [1]	Character	
Best Sell Quantity	LONG LONG	Numeric	Best sell side limit order, price, and quantity information. For BBMM flag refer 9.3 Market Maker & Buy Back Flag (MMBB Flag)
Best Sell Price	LONG	Numeric	
Sell BBMM Flag	CHAR [1]	Character	

Total Traded Quantity	LONG LONG	Numeric	This field contains the total quantity of a security traded on the current day
Indicative Traded Quantity	LONG LONG	Numeric	During order collection period this field will contain Indicative Equilibrium Quantity
Average Traded Price	LONG	Numeric	During order collection period it will always be zero. Once matching starts it will contain the Average Trade Price.
First Open Price	LONG	Numeric	During first call auction 2 order collection period this field will be zero. Once matching starts it will contain the First Trade Price. Once updated for all subsequent call auctions it will not change. This field may remain zero till the first trade happens
Open Price	LONG	Numeric	This field contains the indicative opening price (IOP) of a security for order collection period session and Final Open Price of a security in matching period.
High Price	LONG	Numeric	During order collection period it will always be zero. Once matching starts it will be updated.
Low Price	LONG	Numeric	During order collection period it will always be zero. Once matching starts it will be updated.
Close Price	LONG	Numeric	This field contains the closing price of a security.
Filler	LONG	Numeric	Zero
Info Data Length		**78 Bytes**	

5. File Transcode List

DETAILS	TRANSCODE NUMBER
MARKET OPEN INFORMATION	1
MARKET CLOSE INFORMATION	2
MARKET PRE-OPEN INFORMATION	3
MARKET STATISTICS INFORMATION	5
NEW SECURITY INFORMATION	7
CALL AUCTION MARKET INFORMATION	9
INAV SYMBOL MAPPING TO NSE SYMBOL	10

6. List of Indices

The Indices generated during the trading cycle are identified by Index names. The feed shall not bear these names. Instead, a unique Index token shall identify each index. The clients need to decode the index files by providing following combinations of the Index Token number and Index Name.

Index Token	Index Name	Broadcast Name
0	Nifty 50	NIFTY 50
1	Nifty IT	NIFTY IT
2	Nifty Next 50	NIFTY NEXT 50
3	Nifty 50 USD (NOT IN USE)	NIFTY50 USD (NOT IN USE)
4	Nifty Bank	NIFTY BANK
5	Nifty Midcap 100	NIFTY MIDCAP 100
6	Nifty 500	NIFTY 500
7	Nifty 100	NIFTY 100
8	Nifty Midcap 50	NIFTY MIDCAP 50
9	Nifty Realty	NIFTY REALTY
10	Nifty Infrastructure	NIFTY INFRA
11	INDIA VIX	INDIA VIX
12	Nifty Energy	NIFTY ENERGY
13	Nifty FMCG	NIFTY FMCG
14	Nifty MNC	NIFTY MNC
15	Nifty Pharma	NIFTY PHARMA
16	Nifty PSE	NIFTY PSE
17	Nifty PSU Bank	NIFTY PSU BANK
18	Nifty Services Sector	NIFTY SERV SECTOR
19	Nifty Auto	NIFTY SMLCAP 100
20	Nifty Media	NIFTY 200
21	Nifty Metal	NIFTY AUTO
22	Nifty Smallcap 100	NIFTY MEDIA
23	Nifty 200	NIFTY METAL
24	Nifty Dividend Opportunities 50	NIFTY DIV OPPS 50
25	Nifty Commodities	NIFTY COMMODITIES
26	Nifty India Consumption	NIFTY CONSUMPTION
27	Nifty Financial Services	NIFTY FIN SERVICE
28	Nifty50 Dividend Points	NIFTY50 DIV POINT
29	Nifty100 Liquid 15	NIFTY100 LIQ 15
30	Nifty CPSE	NIFTY CPSE
31	Nifty Growth Sectors 15	NIFTY GROWSECT 15
32	NIFTY50 TR 2X Leverage	NIFTY50 TR 2X LEV
33	NIFTY50 PR 2x Leverage	NIFTY50 PR 2X LEV
34	NIFTY50 TR 1X Inverse	NIFTY50 TR 1X INV

35	NIFTY50 PR 1X Inverse	NIFTY50 PR 1X INV
36	Nifty50 Value 20	NIFTY50 VALUE 20
37	NIFTY100 Quality 30	NIFTY100 QUALTY30
38	Nifty Midcap Liquid 15	NIFTY MID LIQ 15
39	Nifty Private Bank	NIFTY PVT BANK
40	Nifty 8-13 yr G-Sec	NIFTY GS 8 13YR
41	Nifty 10 yr Benchmark G-Sec	NIFTY GS 10YR
42	Nifty 10 yr Benchmark G-Sec (Clean Price)	NIFTY GS 10YR CLN
43	Nifty 4-8 yr G-Sec Index	NIFTY GS 4 8YR
44	Nifty 11-15 yr G-Sec Index	NIFTY GS 11 15YR
45	Nifty 15 yr and above G-Sec Index	NIFTY GS 15YRPLUS
46	Nifty Composite G-sec Index	NIFTY GS COMPSITE
47	NIFTY50 Equal Weight	NIFTY50 EQL WGT
48	Nifty100 Equal Weight	NIFTY100 EQL WGT
49	Nifty100 Low Volatility 30	NIFTY100 LOWVOL30
50	Nifty Alpha 50	NIFTY ALPHA 50
51	NIFTY Midcap 150	NIFTY MIDCAP 150
52	NIFTY Smallcap 50	NIFTY SMALLCAP 50
53	NIFTY Smallcap 250	NIFTY SMALLCAP 250
54	NIFTY MidSmallcap 400	NIFTY MIDSMALLCAP 400
55	NIFTY200 Quality 30	NIFTY200 QUALITY 30
56	Nifty Financial Services 25/50	NIFTY FINSRV25 50
57	NIFTY Alpha Low-Volatility 30	NIFTY ALPHALOWVOL
58	Nifty200 Momentum 30	NIFTY200MOMENTM30
59	Nifty100 ESG Sector Leaders	NIFTY100ESGSECLDR
60	NIFTY HEALTHCARE INDEX	NIFTY HEALTHCARE
61	NIFTY CONSUMER DURABLES	NIFTY CONSR DURBL
62	NIFTY OIL & GAS	NIFTY OIL AND GAS
63	NIFTY500 MULTICAP 50:25:25	NIFTY500 MULTICAP
64	NIFTY LARGEMIDCAP 250	NIFTY LARGEMID250
65	NIFTY MIDCAP SELECT	NIFTY MID SELECT
66	NIFTY TOTAL MARKET	NIFTY TOTAL MKT
67	NIFTY MICROCAP 250	NIFTY MICROCAP250
68	NIFTY INDIA DIGITAL	NIFTY IND DIGITAL
69	NIFTY100 ESG	NIFTY100 ESG
70	NIFTY MIDCAP150 QUALITY 50	NIFTY M150 QLTY50
71	NIFTY INDIA MANUFACTURING	NIFTY INDIA MFG
74	Nifty200 Alpha 30	NIFTY200 ALPHA 30
75	Nifty Midcap150 Momentum 50	NIFTYM150MOMNTM50
76	Nifty India Corporate Group Index - Tata Group 25% Cap	NIFTY TATA 25 CAP
77	Nifty MidSmall Healthcare	NIFTY MIDSML HLTH
78	Nifty500 Multicap India Manufacturing 50:30:20	NIFTY MULTI MFG

79	Nifty500 Multicap Infrastructure 50:30:20	NIFTY MULTI INFRA
80	BHARATBOND-APR25(NOT IN USE)	BHARATBOND-APR25(NOT IN USE)
81	Nifty BHARAT Bond Index - April 2030	BHARATBOND-APR30
82	Nifty BHARAT Bond Index - April 2031	BHARATBOND-APR31
83	Nifty BHARAT Bond Index - April 2032	BHARATBOND-APR32
84	Nifty BHARAT Bond Index - April 2033	BHARATBOND-APR33
85	Nifty India Defence	Nifty Ind Defence
86	Nifty India Tourism	Nifty Ind Tourism
87	Nifty Capital Markets	Nifty Capital Mkt
88	Nifty500 Momentum 50	Nifty500Momentm50
89	Nifty MidSmallcap400 Momentum Quality 100	NiftyMS400 MQ 100
90	Nifty Smallcap250 Momentum Quality 100	NiftySml250MQ 100
91	Nifty Top 10 Equal Weight	Nifty Top 10 EW
92	NIFTY Alpha Quality Low-Volatility 30	NIFTY AQL 30
93	NIFTY Alpha Quality Value Low-Volatility 30	NIFTY AQLV 30
94	Nifty EV & New Age Automotive	NIFTY EV
95	Nifty High Beta 50	NIFTY HIGHBETA 50
96	Nifty India New Age Consumption	NIFTY NEW CONSUMP
97	Nifty India Select 5 Corporate Groups (MAATR)	NIFTY CORP MAATR
98	Nifty Low Volatility 50	NIFTY LOW VOL 50
99	Nifty Mobility	NIFTY MOBILITY
100	NIFTY Quality Low-Volatility 30	NIFTY QLTY LV 30
101	Nifty Smallcap250 Quality 50	NIFTY SML250 Q50
102	Nifty Top 15 Equal Weight	NIFTY TOP 15 EW
103	NIFTY100 Alpha 30	NIFTY100 ALPHA 30
104	NIFTY100 Enhanced ESG	NIFTY100 ENH ESG
105	Nifty200 Value 30	NIFTY200 VALUE 30
106	Nifty500 Equal Weight	NIFTY500 EW
107	Nifty500 Multicap Momentum Quality 50	NIFTY MULTI MQ 50
108	NIFTY500 Value 50	NIFTY500 VALUE 50
109	Nifty Top 20 Equal Weight	NIFTY TOP 20 EW
110	Nifty Core Housing	NIFTY COREHOUSING
111	Nifty Financial Services Ex-Bank	NIFTY FINSEREXBNK
112	Nifty Housing	NIFTY HOUSING
113	Nifty IPO	NIFTY IPO
114	Nifty MidSmall Financial Services	NIFTY MS FIN SERV
115	Nifty MidSmall India Consumption	NIFTY MS IND CONS
116	Nifty MidSmall IT & Telecom	NIFTY MS IT TELCM
117	Nifty Non-Cyclical Consumer	NIFTY NONCYC CONS
118	Nifty Rural	NIFTY RURAL

119	Nifty Shariah 25	NIFTY SHARIAH 25
120	Nifty Transportation & Logistics	NIFTY TRANS LOGIS
121	Nifty50 Shariah	NIFTY50 SHARIAH
122	Nifty500 LargeMidSmall Equal-Cap Weighted	NIFTY500 LMS EQL
123	Nifty500 Shariah	NIFTY500 SHARIAH
124	Nifty500 Quality 50	NIFTY500 QLTY50
125	Nifty500 Low Volatility 50	NIFTY500 LOWVOL50
126	Nifty500 Multifactor MQVLv 50	NIFTY500 MQVLV50
127	Nifty50 USD	Nifty50 USD
128	Nifty500 Flexicap Quality 30	Nifty500 Flexicap
129	Nifty Total Market Momentum Quality 50	Nifty TMMQ 50
130	Nifty India FPI 150	Nifty FPI 150
131	NIFTY SME EMERGE	Nifty SME Emerge
132	Nifty India Internet	Nifty Internet
133	Nifty Chemicals	Nifty Chemicals
134	Nifty Waves	Nifty Waves
135	Nifty India Infrastructure & Logistics	Nifty InfraLog
136	Nifty500 Healthcare	Nifty500 Health
137	Nifty India Railways PSU	Nifty RailwaysPSU
138	Nifty Conglomerate 50	NiftyConglomerate

List of Dummy indices:

Index Token	Index Name	Broadcast Name
72	INDEX1 NSETEST	INDEX1 NSETEST
73	INDEX2 NSETEST	INDEX2 NSETEST

7 Data Field Details

7.1 Security Token Number

The Security Token numbers uniquely identify each security listed on the National Stock Exchange of India Ltd. The token number, Symbol and Series identify a single and unique security. The client will be provided with a binary file i.e., Securities.dat giving the combinations of all securities traded on the Exchange. Any further additions, modifications and deletions will be updated in Securities.dat file as part of the feed in /CM30/SECURITY folder.

7.2. Timestamp

The timestamp is the number of seconds elapsed from midnight Jan 1, 1980.

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 the 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 the 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.

Your 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 something 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 with exchange for requesting the credentials.

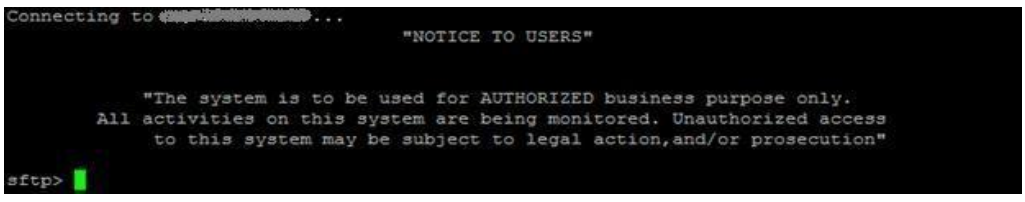
NOTE: In above steps the words "host" and "user" are used to represent the host name and username of the machine. This is used for demo purpose only. The same will differ as per your server and usernames.

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

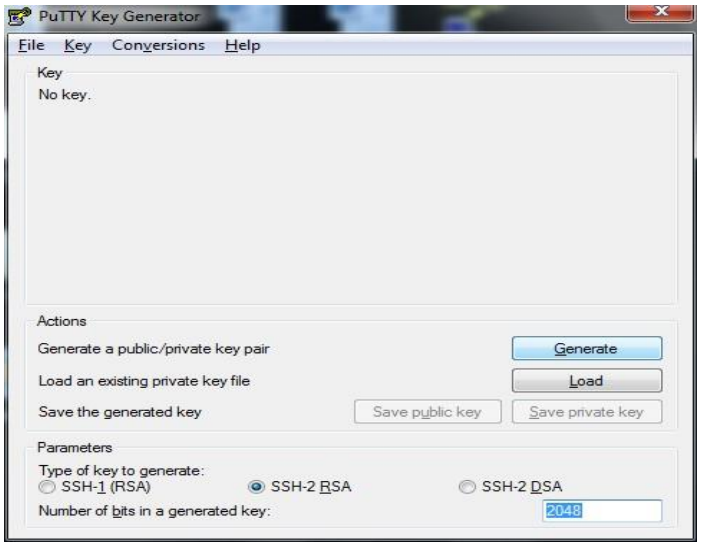
Help may be obtained with SFTP commands by typing the "help" command at the SFTP prompt.

8.2. SFTP on Windows platform

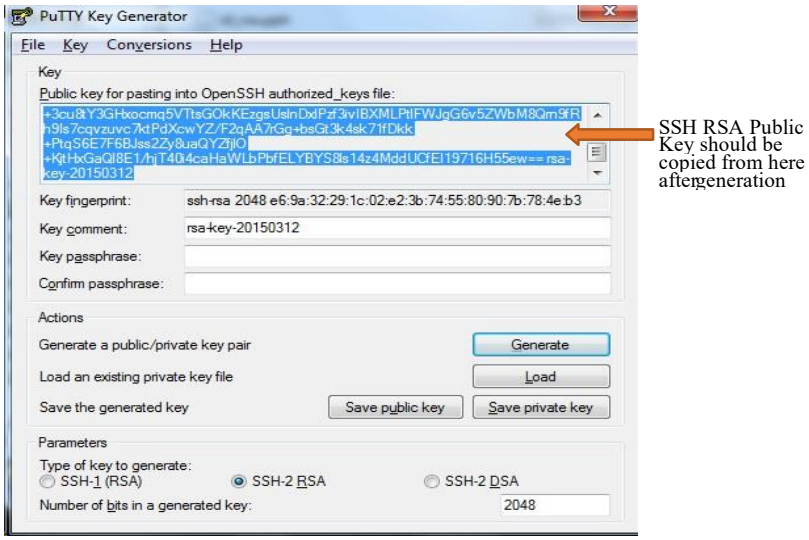
8.2.1. Generation of the SSH RSA key-pair on Windows

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 below screenshot) 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 for 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 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. Notes

9.1 All prices are in Paisa

All price fields are multiplied by 100 and this implies that the prices received by the clients must be divided by 100.

For India VIX index, the index value is of four decimal precisions. Hence, the values received by the clients for the India VIX index must be divided by 10000.

9.2 Call Auction Market (Call Auction 2)

Call auction 2 Market includes Periodic Call auction session for illiquid scrips and call auction 2 in pre-open 2 session (IPO and Re-listed securities).

9.3 Market Maker & Buy Back Flag (MMBB Flag)

For the probable values of BBMM flag refer the table given below

1. **Sell BBMM Flag**: Buy Back or Market Maker order at that price point.
2. **Buy BBMM Flag:** Buy Back or Market Maker order at that price point.

Buy_Back_Order Exists	Market_Maker_Order Exists	Sell BBMM Flag/ Buy BBMM Flag
No	No	'0'
Yes	No	'1'
No	Yes	'2'
Yes	Yes	'3'

E.g., If Buy Back and Market Maker orders exist at price point then the above fields will contain '3'.

10. Decoding Snapshot files

Please refer following C snippet for decoding snapshot files:

```
HEADER header     = {0};
DATA_MBP data_mbp = {0};
DATA_CA2 data_ca2 = {0};
DATA_IND data_ind = {0};
TRAILER trailer   = {0};

int main()
{
 gzFile  fpFile = gzopen("1.mkt.gz", "rb");
 while
 {
      int nRetVal = gzread(fpFile, &header ,sizeof(HEADER));
      if(header.nTranscode == MBP)
      {
            gzread(fpFile, &data_mbp, sizeof(data_mbp));
            print(&data_mbp);
      }

      else if(header.nTranscode == CA2)
      { gzread(fpFile, &data_ca2, sizeof(data_ca2)); }

      else if(header.nTranscode == IND)

      { gzread(fpFile, &data_ind, sizeof(data_ind)); }

      nRetVal = gzread(fpFile, &trailer, sizeof(TRAILER));
      if(gzeof(fpFile) == 1)
      {
                  printf("EOF reached ");
                  break;
      }
 }
 gzclose(fpFile);
}

void print(DATA_MBP *data_mbp)
{
 printf("Security Token = %d ,Last Traded Price = %d,
  Best Buy Quantity = %d,  ....." ,data_mbp->SecurityToken,
  data_mbp->LastTradedPrice,data_mbp->BestBuyQuantity);
}
```

11. Annexure

11.1 Acronyms Used

BOD	Begin Of Day Information
EOD	End Of Day Information
Online	Information Sent During Market Timing
CM	Cash Market
F&O/FAO	Future & Options Market
CD	Currency Derivatives Market
WDM	Wholesale & Debt Market
COM	Commodity Market
CBRICS	Corporate Bond Reporting and Integrated Clearing System
NSE IX	NSE International Exchange
MTBT	Multicast Tick By Tick
MBP	Market By Price
OI	Open Interest

12. FAQs

1) Download of files through SFTP was working till last week, suddenly our connection to sftp is failing. How do we resolve it?

If using 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

2) How do we decode compressed *.mkt and *.oi files?

Please refer section 10 for decoding Snapshot Files, which involves decompression and reading of *.mkt and *.oi files.

3) How to identify BSE listed securities?

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

Symbol at BSE	Symbol at NSE (up to 10 characters)
SYMBOLABCDE	SYMBOLABC$
SYMBOLKLMN	SYMBOLKLM$
SYMBOLAB	SYMBOLAB$

All symbol fields in security packets shall contain BSE exclusive securities along with NSE securities.

4) What causes the mkt files generated between 09:24 and 09:30 IST to be empty?

The pre-open session runs from 09:00 to 09:15 IST and consists of two phases: the order collection period and the order matching period.
Order Collection Period (09:00–09:08 IST):
During the first eight minutes, orders are collected, and the mkt files generated in this window contain valid data. The order collection session may close randomly anytime between the 7th and 8th minute.
Order Matching Period (09:09–09:15 IST):
In this phase, the exchange determines the equilibrium price. No orders or trades occur during this time, resulting in mkt files that are expectedly empty.

Since this product provides a 15-minute delayed snapshot, the mkt files generated between 09:24 and 09:30 IST correspond to the 09:09–09:15 IST order-matching phase and therefore appear empty.

13. Contact Information

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