



## **EOD DATA (Future & Options)**

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**Revision History**

<b>Name</b>	<b>Description</b>	<b>Date</b>
Version 1.0	New Specification Issued	11 December 2020
Version 1.1	Segregation of EOD (End of Day) products CM, FO & CD	01 April 2025

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## EOD Data – FAO

### 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

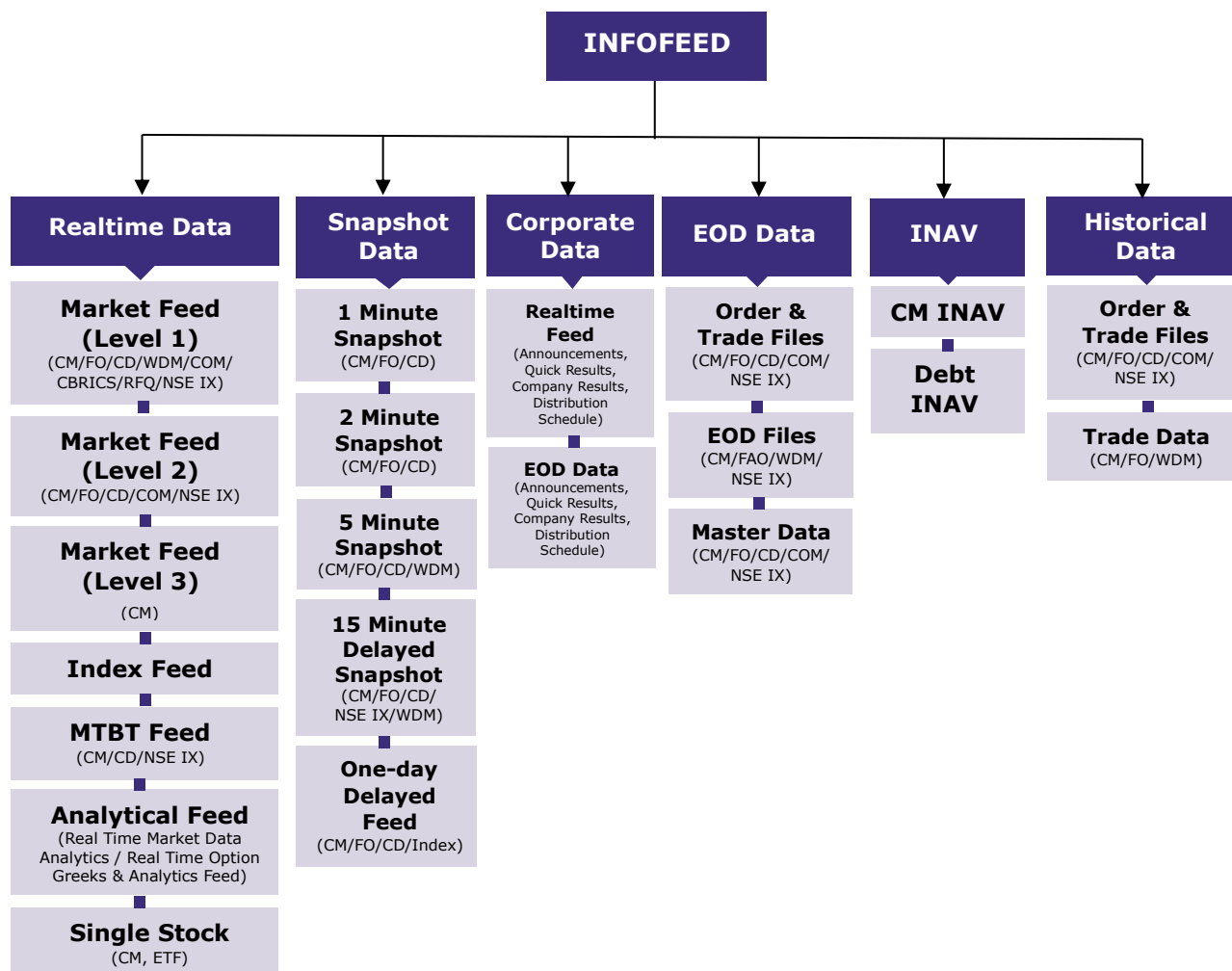
#### **Historical data products**

1. End of Day Data
2. Historical Data

The data products are provided through delivery modes mentioned below:

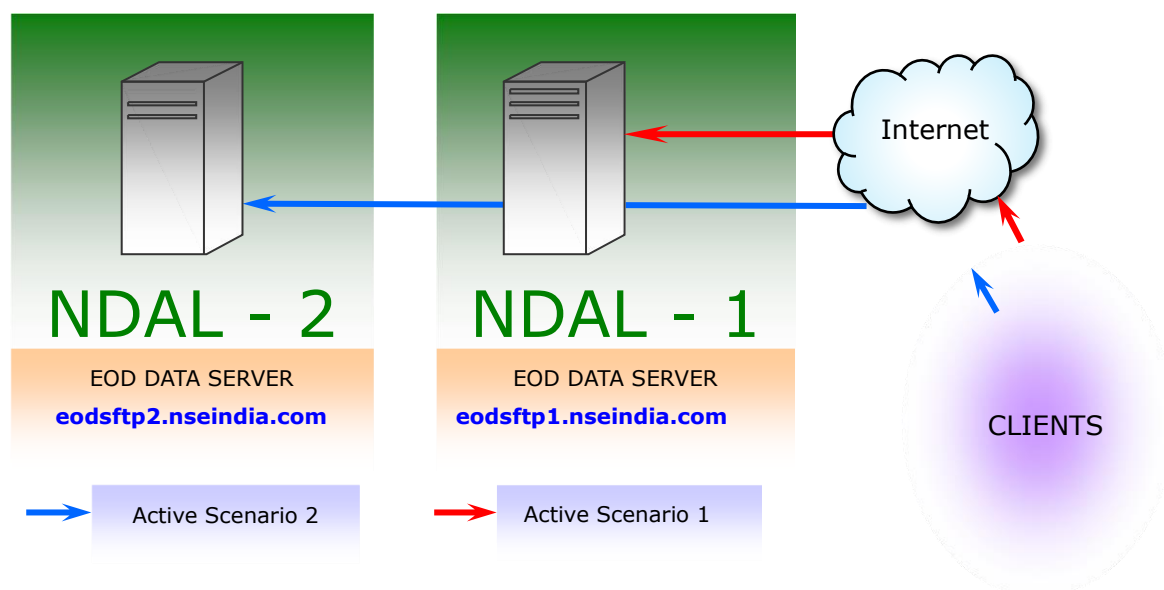
- **Real-time Data:** The information is transmitted as a packet broadcast, facilitating ongoing distribution through data feeds via point-to-point leased line.
- **Snapshot, End-of-Day, and Historical Data:** The data is delivered as downloadable files over the internet using the SFTP protocol.

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



This document explains about the NSE –End of Day Product. In this product, the End of Day Bhavcopy information along with security and trade details are available. This Product also includes Closing price, Market activity reports, Market gainers and losers, Market toppers and other details that gives wide information about the Capital market.

All clients should connect to the EOD Data server (NSE – End of Day Data server) through the internet and use SFTP protocol to download the files. The files on this server are generated at EOD. To gain access to the EOD server, clients must provide their server public key and public static IP address. The Clients are provided with a User ID for the agreement period for logging in over SFTP.



In NDAL premises, these two servers are available in active-active configuration. If one server stops responding, the clients are expected to switch over to the other server and vice-versa

## 1.1 SFTP Connection Details

Segment	Server	URL	Port
EOD Data	Primary	eodsftp1.nseindia.com	7010
	Secondary	eodsftp2.nseindia.com	7010

## 2 List of Data Files

The list of the files provided as EOD Data in Futures & Options market is given below –

Sr No	File Name
1	<a href="#">fo_ddmmyyyy.csv</a>
2	<a href="#">futidxddmmyyyy.csv</a>
3	<a href="#">futivxddmmyyyy.csv</a>
4	<a href="#">optidxddmmyyyy.csv</a>
5	<a href="#">ttopddmmyyyy.csv</a>
6	<a href="#">futstkddmmyyyy.csv</a>
7	<a href="#">ttfutddmmyyyy.csv</a>
8	<a href="#">optstkddmmyyyy.csv</a>
9	<a href="#">foddmmyyyy.csv</a>
10	<a href="#">opddmmyyyy.csv</a>
11	<a href="#">foddmmyy.csv</a>
12	<a href="#">opddmmyy.csv</a>



### 3 Details of Data Files

#### 3.1 fo\_ddmmyyyy.csv

This file contains Total volume summary of Futures and Options by product type.

##### **Data Structure**

- 1) Product
- 2) No. of Contracts
- 3) Traded Value (Rs. in crores)

#### 3.2 futidxddmmyyyy.csv

This file contains Symbol wise index futures volume summary.

##### **Data Structure**

- 1) Symbol
- 2) No. of Contracts Traded
- 3) Traded Quantity
- 4) Total Traded Value (Rs. in crores)
- 5) Open interest (Qty.) at end of trading hours.

#### 3.3 futivxddmmyyyy.csv

This file contains Symbol wise India VIX futures (Volatility Index) volume summary.

##### **Data Structure**

- 1) Symbol
- 2) Traded Value (Rs.)
- 3) No. of Contracts

#### 3.4 optidxddmmyyyy.csv

This file contains Symbol wise index options volume summary.

##### **Data Structure**

- 1) Symbol
- 2) No. of Contracts Traded
- 3) Traded Quantity
- 4) Total Traded Value (Rs. in crores)
- 5) Open interest (Qty.) as at end of trading hours

### 3.5 ttoptddmmyyyy.csv

This file contains the Top 20 contracts in stock options.

#### Data Structure

- 1) Symbol
- 2) Expiry Date
- 3) Strike Price
- 4) Option Type
- 5) No. of Contracts
- 6) Notional Value (Rs.)

### 3.6 futstkddmmyyyy.csv

This file contains Symbol wise stock futures volume summary.

#### Data Structure

- 1) Symbol
- 2) Traded Value (Rs.)
- 3) No. of Contracts

### 3.7 ttfutddmmyyyy.csv

This file contains the Top 10 contracts in stock futures.

#### Data Structure

- 1) Symbol
- 2) Expiry Date
- 3) Traded Value (Rs.)
- 4) No. of Contracts

### 3.8 optstkddmmyyyy.csv

This file contains Symbol wise stock options volume summary.

#### Data Structure

- 1) Symbol
- 2) No. of Contracts Traded
- 3) Notional Value (Rs.)



### 3.9 foddmmyyyy.csv

This file contains Contract wise futures volume summary.

#### Data Structure

- 1) Instrument
- 2) Symbol
- 3) Expiry Date
- 4) Open Price
- 5) High Price
- 6) Low Price
- 7) Close Price
- 8) Open Interest
- 9) Traded Value
- 10) Traded Quantity
- 11) No. of Contracts
- 12) No. of Trades

### 3.10 opddmmyyyy.csv

This file contains Contract wise options volume summary.

#### Data Structure

- 1) Instrument
- 2) Symbol
- 3) Expiry Date
- 4) Strike Price
- 5) Option Type
- 6) Open Price
- 7) High Price
- 8) Low Price
- 9) Close Price
- 10) Open Interest
- 11) Traded Quantity
- 12) No. of Contracts
- 13) No. of Trades
- 14) Notion Value
- 15) Premium value

### 3.11 foddmmyy.csv

#### Data Structure

- 1) Contract Description
- 2) Previous Close
- 3) Open Price
- 4) High Price
- 5) Low Price
- 6) Close Price
- 7) Settlement Price
- 8) Net Change
- 9) Open Interest Number of Contracts
- 10) Traded Quantity
- 11) Number Of Trades
- 12) Total Traded Volume

### 3.12 opddmmyy.csv

#### Data Structure

- 1) Contract Description
- 2) Previous Close
- 3) Open Price
- 4) High Price
- 5) Low Price
- 6) Close Price
- 7) Settlement Price
- 8) Net Change
- 9) Open Interest Number of Contracts
- 10) Traded Quantity
- 11) Trade Number
- 12) Notional Value
- 13) Premium Trade

**Note:**

Along with these files, fohelp.txt file is also put.

This file contains details about the respective files that are available for downloading for the day.

Whenever there is corporate action in the F&O market the following files get uploaded.

1. mpl\_MONTHYYYY.csv
2. fopl\_MONTHYYYY.csv
3. ffpl\_MONTHYYYY.csv

**Note on Number Format:**

In this document, Indian numbering conventions are used. For reference:

1 lakh = 100,000

1 crore = 10,000,000 (i.e., 10 million)

## 4. 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.

### 4.1 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 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.

#### 4.1.1 Generation of the SSH RSA key-pair on Linux

- Generate the new key-pair with the 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, the 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 purposes only. The same will differ as per your server and usernames.

## 4.1.2 SFTP Login

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

```
sftp -o PORT=7010 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:

```
Connecting to 192.168.1.100...
"NOTICE TO USERS"

"The system is to be used for AUTHORIZED business purpose only.
All activities on this system are being monitored. Unauthorized access
to this system may be subject to legal action, and/or prosecution"

sftp> █
```

### 4.1.3 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.

### 4.1.4 Ending the SFTP session

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

### 4.1.5 SFTP commands help

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

## 4.2. SFTP on Windows platform

### 4.2.1. Generation of the SSH RSA key-pair on Windows

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

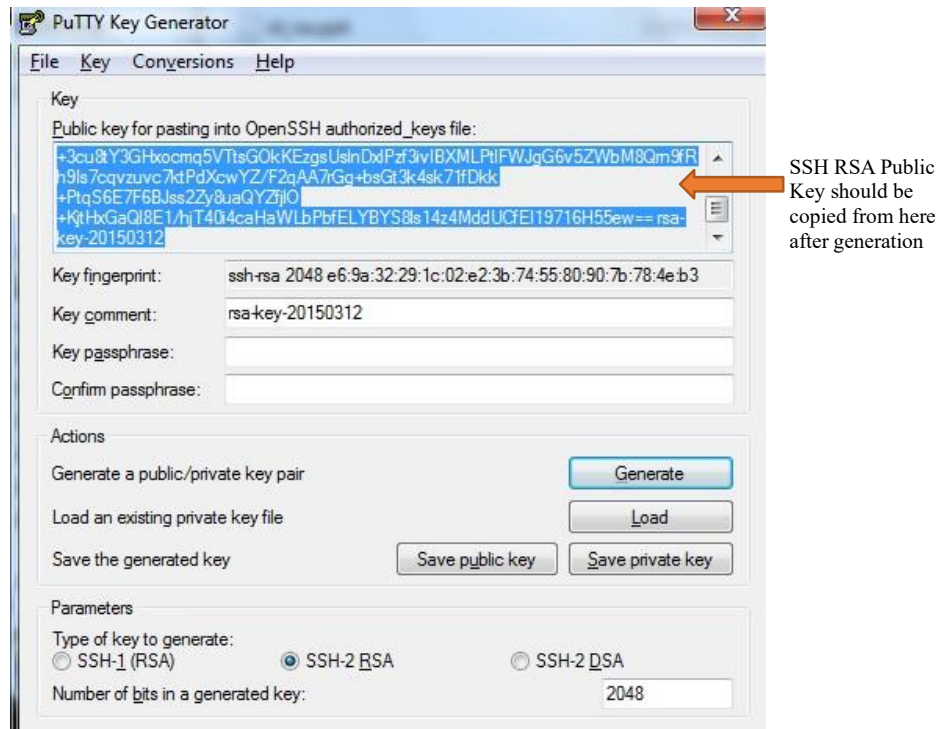
Download the PuttyGen application (freely available on the Internet). Then follow these steps to generate the key-pair:

- 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.



- 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.

#### 4.2.2. 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.

### 4.3. 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.



## 5 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

## 6 Support Information

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