

NATIONAL STOCK EXCHANGE OF INDIA LIMITED**DEPARTMENT : FUTURES & OPTIONS**

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All Members,

Tick by Tick market data via Multicast

This is in continuation of Exchange circular no. NSE/FAOP/33923 dated December 30, 2016. In continuous endeavour to improve member experience, Exchange is pleased to inform members the revised details of market data broadcast for Tick by Tick order and trade data via Multicast as given in Annexure 1.

This circular shall be effective from April 01, 2017.

All other market data (5 depth 1 second refresh) broadcast details of the circular NSE/FAOP/33923 dated December 30, 2016 remains unchanged.

**For and on behalf of
National Stock Exchange of India Limited**

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Annexure 1

Tick by Tick order and trade data via Multicast (MTBT)

A) Master Files for MTBT

(i) Members have to refer to following MTBT master files for mapping information about the stream id and token number of the security/contract. The updated master files shall be available on the following path on a daily basis:-

Segment	Extranet path	File name
CM	/ftp/common/tbt_masters	cm_contract_stream_info.csv
FO	/faofp/faocommon/tbt_masters	fo_spd_contract_stream_info.csv fo_contract_stream_info.csv
CD	/cdsftp/cdscommon/tbt_masters	cd_contract_stream_info.csv cd_spd_contract_stream_info.csv

(ii) Members' desirous of receiving the content of the master files via broadcast may configure the below parameters for respective segments-

MTBT- Master Multicast Parameters			
Segment	Stream ID	Multicast IP Address	Multicast Port
CM	101	239.60.60.11	10611
FO	101	239.70.70.11	10811
CD	101	239.80.80.13	10813

B) Segment wise details of IP address and port are as below:

Segment	Stream ID	Contents	Multicast IP Address	Multicast Port	Approx. bandwidth utilization
CM	1	As per master stream file	239.60.60.21	10621	3.0 Mbps
	2	As per master stream file	239.60.60.22	10622	3.0 Mbps
	3	As per master stream file	239.60.60.23	10623	3.0 Mbps
	4	As per master stream file	239.60.60.24	10624	3.0 Mbps

Segment	Stream ID	Contents	Multicast IP Address	Multicast Port	Approx. bandwidth utilization
FO	1	Nifty options	239.70.70.21	10821	13.0 Mbps
	2	NIFTY futures contracts and all other Index futures and option contracts (other than NIFTY and BANKNIFTY)	239.70.70.22	10822	3.0 Mbps
	3	Stock futures and Options (For symbol starting S to Z)	239.70.70.23	10823	10.0 Mbps
	4	Stock futures and Options (For symbol starting I to L)	239.70.70.24	10824	9.0 Mbps
	5	BANKNIFTY futures and options	239.70.70.25	10825	21.0 Mbps
	6	Stock futures and Options (For symbol starting A to B)	239.70.70.26	10826	8.0 Mbps
	7	Stock futures and Options (For symbol starting C to H)	239.70.70.27	10827	4.0 Mbps
	8	Stock futures and Options (For symbol starting M to R)	239.70.70.28	10828	3.0 Mbps

Segment	Stream ID	Contents	Multicast IP Address	Multicast Port	Approx. bandwidth utilization
CD	1	All currency pairs and interest rate futures	239.80.80.21	10821	700 Kbps

Note: The approximate bandwidth utilization mentioned above is current utilization of each stream and will vary as per market activity.

C) Tick agent

Tick Agent application is an optional utility provided by the exchange and can be installed at client end server for receiving tick data. Tick data which consists of orders and trades is received from the exchange on multicast by tick agent. The tick agent forwards the same data to client end applications on multicast.

Tick Agent also provides tick data recovery on TCP. If the client application loses tick data on multicast, it can request the tick agent for recovering the missed tick data on TCP.

Client end applications can receive multicast tick data directly without using tick agent. They can also recover missed tick data from the exchange directly on TCP.

The TICK Agent application file is available for members on extranet on the below path

Segment	Tick Agent Setup Path on Extranet
CM	/common/TBT_Linux/TICK_AGENT_LINUX_1.0.3
	/common/TBT_Windows/TICK_AGENT_WINDOWS_1.3
FO	/faoftp/faocommon/TBT_Linux/TICK_AGENT_LINUX_1.0.3
	/faoftp/faocommon/TBT_Windows/TICK_AGENT_WINDOWS_1.3
CD	/cdsftp/cdscommon/TBT_Linux/TICK_AGENT_LINUX_1.0.3
	/cdsftp/cdscommon/TBT_Windows/TICK_AGENT_WINDOWS_1.3

D) Recovery of tick by tick data

Tick data is available for recovery on TCP. There are multiple recovery servers at the exchange end. If the client end application misses any tick data it can recover the missed ticks by sending request on TCP to any of the recovery server IPs provided by the exchange (IPs and ports are provided below). The response messages will be provided on TCP. The TCP connections for recovering messages are not persistent.

A new connection has to be made for each and every recovery request. Client end applications using tick agent can recover missed tick data on TCP by sending recovery request to the tick agent.

CM	
IP Address	Port
172.28.124.34	10984
172.28.124.35	10985
172.28.124.41	10981
172.28.124.42	10982

FO	
IP Address	Port
172.28.124.30	10990
172.28.124.31	10991
172.28.124.37	10992
172.28.124.38	10993

CD	
IP Address	Port
172.28.124.32	10970
172.28.124.33	10971
172.28.124.39	10972
172.28.124.40	10973