

NATIONAL STOCK EXCHANGE OF INDIA LIMITED

DEPARTMENT : CAPITAL MARKET SEGMENT

Download Ref No : NSE/CMTR/34986

Date : May 30, 2017

Circular Ref. No : 35/2017

All Members,

Tick by Tick market data via Multicast

This is further to Exchange circulars NSE/CMTR/34212 dated February 17, 2017, NSE/CMTR/34488 dated March 28, 2017, NSE/CMTR/34641 dated April 13, 2017 and NSE/CMTR/34789 dated May 4, 2017.

This circular supersedes the above mentioned Exchange circulars.

The revised details of market data broadcast for Tick by Tick order and trade data via Multicast are provided in Annexure 1.

Members may kindly note that the changes as per this circular shall be effective from June 03, 2017.

Important Notes:

1. Market participants are advised to subscribe and migrate to 'New Source 1' at the earliest for better experience as compared to existing Source 1 and 2.
2. Further, market participants are also advised to monitor and adequately size their infrastructure and systems while subscribing to these feeds.

**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	/faoftp/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:

Market participants are advised to subscribe and migrate to 'New Source 1' at the earliest for better experience as compared to existing Source 1 and 2. Further, market participants are also advised to monitor and adequately size their infrastructure and systems while subscribing to these feeds.

CM								
Stream ID	Contents	New Source 1		Source 1		Source 2		Approx. bandwidth utilization
		Multicast IP Address	Multicast Port	Multicast IP Address	Multicast Port	Multicast IP Address	Multicast Port	
1	As per master stream file	239.60.60.41	16641	239.60.60.21	10621	239.60.60.31	10631	3.0 Mbps
2	As per master stream file	239.60.60.42	16642	239.60.60.22	10622	239.60.60.32	10632	3.0 Mbps
3	As per master stream file	239.60.60.43	16643	239.60.60.23	10623	239.60.60.33	10633	3.0 Mbps

4	As per master stream file	239.60.60.44	16644	239.60.60.24	10624	239.60.60.34	10634	3.0 Mbps
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FO								
Stream ID	Contents	New Source 1		Source 1		Source 2		Approx. bandwidth utilization
		Multicast IP Address	Multicast Port	Multicast IP Address	Multicast Port	Multicast IP Address	Multicast Port	
1	Nifty options	239.70.70.41	17741	239.70.70.21	10821	239.70.70.31	10831	21.0 Mbps
2	NIFTY futures contracts and all other Index futures and option contracts (other than NIFTY and BANKNIFTY)	239.70.70.42	17742	239.70.70.22	10822	239.70.70.32	10832	4.0 Mbps
3	Stock futures and Options (For symbol starting S to Z)	239.70.70.43	17743	239.70.70.23	10823	239.70.70.33	10833	11.0 Mbps
4	Stock futures and Options (For symbol starting I to L)	239.70.70.44	17744	239.70.70.24	10824	239.70.70.34	10834	9.0 Mbps
5	BANKNIFTY futures and options	239.70.70.45	17745	239.70.70.25	10825	239.70.70.35	10835	17.0 Mbps
6	Stock futures and Options (For symbol starting A to B)	239.70.70.46	17746	239.70.70.26	10826	239.70.70.36	10836	8.0 Mbps
7	Stock futures and Options (For symbol starting C to H)	239.70.70.47	17747	239.70.70.27	10827	239.70.70.37	10837	4.0 Mbps

8	Stock futures and Options (For symbol starting M to R)	239.70.70.48	17748	239.70.70.28	10828	239.70.70.38	10838	3.0 Mbps
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CD								
Stream ID	Contents	New Source 1		Source 1		Source 2		Approx. bandwidth utilization
		Multicast IP Address	Multicast Port	Multicast IP Address	Multicast Port	Multicast IP Address	Multicast Port	
1	All currency pairs and interest rate futures	239.80.80.41	18841	239.80.80.21	10821	239.80.80.31	10831	700 Kbps

Notes:

1. The approximate bandwidth utilization mentioned above is current utilization of each stream and will vary as per market activity. With respect to using Exchange data, Member's may kindly take note of Exchange circular NSE/MEM/26958 dated June 19, 2014. Exchange data can be used by Member's clients who are registered for trading with the member on the Exchange in any segment.
2. With reference to point B of Annexure 2 of circular ref NSE/CMTR/33922 dated December 30, 2016, stream IDs other than the ones mentioned herein above shall be discontinued.

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. Also, the recovery requests are served from file stored in recovery server. Due to these factors, there is a lag / delay in the tick data from recovery servers, as compared to direct multicast feed.

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