

Technical Notice **14-011**

TO: Montréal Exchange Participants & Vendors

FROM: Market Access Manager

SUBJECT: High Speed Vendor Feed (HSVF) in Multicast Format

DATE: July 18, 2014

The purpose of this notice is to inform all participants and ISVs the Bourse de Montréal (“the Bourse”) will extend its service of Market Data, High Speed Vendor Feed (HSVF) to a multicast format. The recommendation to move to multicast is based mainly on feedback from participants as well as adhering to industry standards. The new multicast feeds will enhance the market data performance and conform to current industry standards. Participants can access Futures, Options on Futures, Equity and Index Options through a lower latency multicast feed that reduces the need for multiple feed connections for participants that replicate the market data to multiple feed handlers. The activation date for the multicast feeds is planned for **Monday, September 15, 2014**.

HSVF MULTICAST OVERVIEW

At this time, the Bourse will NOT eliminate the existing UNICAST market data feed. The new multicast feed will run in parallel with the existing HSVF TCP/IP format. Participants and Vendors will need to plan their migration over to the multicast market data feed as the Bourse plans to decommission the legacy UNICAST TCP based market data feed in Q3 2015.

The new MX HSVF multicast feed will be available from each of our existing Points of Presence (POP). Our present locations are Markham (MCC), Toronto (TCF), New York, Chicago, and London.

Though similar to the TCP version of the feed, there are slight differences that need consideration. One is replacing the current “RS” message, which allows participants to specify the feed data they wish to receive. Participants will now need to subscribe to the proper multicast feed(s) they wish to receive.

Participants and vendors that plan to use the TCP message retransmission functionality will be required to go through a TCP RETRANSMISSION COMPLIANCE TEST.

AVAILABLE PRODUCTION AND GTE MULTICAST FEEDS

The following multicast feeds will be available:

DESCRIPTION	FEED ID	PRODUCTS
Futures Level 1	F1	Futures and Options on Futures
Futures Level 2	F2	Futures and Options on Futures
Options Level 1	O1	Equity and ETF Options
Options Level 2	O2	Equity and ETF Options

For resiliency, two instances of the feeds will be available:

- A feeds (F1-A, F2-A, O1-A, O2-A)

- **B feeds (F1-B, F2-B, O1-B, O2-B)**

Both instances will be identical. Clients can choose to receive either one to obtain the real time MX market data feeds.

MULTICAST MARKET DATA RECOMMENDED BANDWIDTH

Please note that bandwidth requirements have been adjusted for the new multicast feed to take into consideration the behavior of UDP and the potential impacts of microbursts.

CLIENT BANDWIDTH	F1, O1	F2, O2
<100 megabits	Frequent message loss during peak periods and during microbursts	Frequent message loss during peak periods and during microbursts
100 megabits	Rare, if any, message loss	Infrequent message loss
1 gigabit or greater	Rare, if any, message loss	Rare, if any, message loss

Note: The client results will depend on their infrastructure design.

Please refer to Montreal Exchange Multicast Feed Service Access Guide for further details on the bandwidth requirements.

CONNECTION TIME AND DICTIONARY TRANSMISSION

EVENT	TIME
Start of Day	1:00 a.m. EST
Dictionary Transmission	1:30 a.m. EST

As opposed to the UNICAST TCP market data feed where the dictionary (list of all active instruments) is transmitted when participants initiate their connection, the multicast feed will broadcast the dictionary at a specific time (1:30 a.m. EST). Participants are recommended to ensure that their feed handlers subscribe to the multicast feeds before the dictionary transmission to avoid any missed messages. Otherwise participants will have to fall back to the TCP retransmission service to request any missed messages prior to market open. This service can also be used intraday.

The SOLA HSVF UDP Multicast Specification Guide for MX, which details the multicast HSVF messaging, is available for participants so they can adjust their feed handling software. A new Montreal Exchange Multicast Feed Service Access Guide is also available and details the multicast distribution, POP locations, IP information, and bandwidth requirements.

To obtain the new specifications, please contact the Technical Help Desk (see below) or mbourcier@m-x.ca.

GENERAL TEST ENVIRONMENT (GTE) AND PREPARATION

The GTE test environment allows clients to perform functional tests. No performance or capacity tests can be conducted.

It is important to note the HSVF multicast distribution is not compatible with VPN and therefore clients using VPN to access GTE will not be able to receive the multicast feeds. Clients using VPN will, however, be able to test against the TCP retransmission feature.

SOLA HSVF UDP multicast feeds and retransmission services are available in the MX test environment starting immediately. Customers that plan to develop based on UDP protocol will need to request access and schedule the required compliance test for the message retransmission service.

Application testing and support is available Mondays through Fridays, from 8:00 a.m. EST to 4:30 p.m. EST. After-hours testing is available, without support, on Mondays through Fridays, from 1:00 a.m. EST to 8:00 a.m. EST and from 4:30 p.m. EST to 10:30 p.m. EST.

CONTACT INFORMATION

For additional information on this notice or if you require technical assistance, please contact the Technical Help Desk.

TECHNICAL HELP DESK	
Toll-Free	1-877-588-8489
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We thank you for your cooperation.

Mark Bourcier
Market Access Manager