

TO: Montréal Exchange Participants

FROM: Head, Customer Relations

SUBJECT: MX Participation in the SIFMA, FIA 2016 Disaster Recovery Tests

**DATE:** July 28, 2016

The Montréal Exchange (MX) will be participating in the aligned Futures Industry Association's (FIA) and Securities Industry and Financial Markets Association (SIFMA) Disaster Recovery tests on Saturday, October 15, 2016, including the pre-connectivity test held on Saturday, September 10, 2016.

This document details the sequence of events during the Disaster simulation. It also provides information on registration, pre-connectivity date and contact information.

## Pre-Connectivity information - September 10, 2016

SIFMA-FIA	Pre-Connectivity Test
Date	September 10, 2016
MX Participants Start Time	10 h
MX Participants End Time	13 h

The purpose of this test is to establish and confirm connectivity. As stated in the TMX Information Technology (IT) policy, "PING" testing is not permitted, therefore all MX Participants will need to connect to MX systems in order to test and validate connectivity.

MX Participants can test pre-connectivity with the following services

SAIL	FIX	ATR
Drop Copy	TMS	Clearing API
MX FTP/SFTP Server (EOD and PAR Reports)	LOPR	HSVF (unicast & multicast)

As long as testing is conducted between 10:00 am and 1:00 pm EDT, no testing appointments are required.

The Technical Help Desk (THD) and TMX IT Group support staff will be available to assist. Participants are required to advise THD by phone or email once they have successfully connected.

# On Saturday October 15, 2016

# Test day timelines overview

Time	Access to Primary or back-up system		Instrument state
7:00 am - 7 :55 am	Primary		Pre-open
7:55 am - 11 :00 am*	* No access	7:55 - 9:00 disaster simulation	Market out of service
7.55 aiii - 11 .00 aiii		9:00 - 11:00 recovery	
Time of recovery until 1:30	Back-up		15 minutes - Pre-Open
pm		back-up	Trading

<sup>\*</sup>System will be up at the latest by 11

## **Pre-Failover**

Starting at 7:00 am EDT, the Primary site (MCC) will be up and running and participants will be able to engage connectivity.

- > Selected instruments will be in a pre-open phase. No trading will occur.
- > MX will not be using its production database for these tests. The order book will be empty when tests begins. Orders must be entered with October 15 date (day orders only)

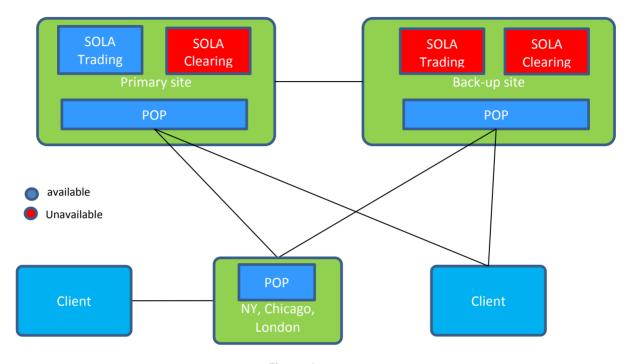
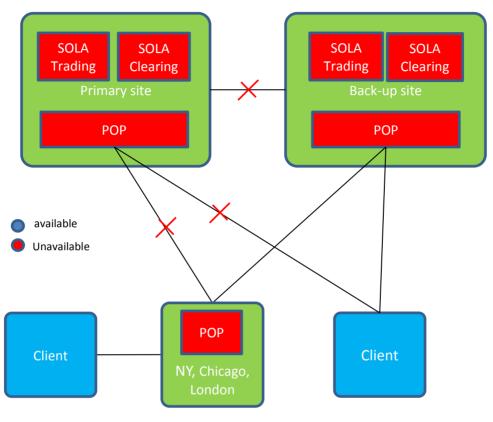


Figure 1

## Disaster simulation and recovery

Between 7:55 am to (latest) 11:00

> 7:55 am: MX will abruptly interrupt SOLA trading. In the approximate 15 minutes that follows, POP access will also be interrupted. In consequence, the primary site will be isolated by a network failover as shown in figure 2 below.



#### Post-failover

Between 10:30 am - 11:00 am EDT, MX will have switched over to the back-up location in Toronto (DR site known as TCF).

- Immediately following the conclusion of our recovery process, we will offer a 15-minute pre-open period, followed by an instrument state change to allow for continuous trading. Products will remain in a tradable state until 1:30 pm EDT.
- There is no continuity between the pre-open session and this one. Our back-up system will start as if it were a new day. If you were previously connected to our system, please make sure to reset your system to avoid de-synchronization of messaging.
- > All orders entered during the pre-failover period will have been purged from the system.
- During the test, MX Participants and ISVs will be able to connect to the MX Production network (IP & ports) from their Disaster Recovery (DR) environment. MX will redirect participants to the MX DR environment in a seamless fashion, as shown in Figure 3, below.
- MX Participants must be in a position to maintain their connectivity to the MX from TCF or to any of our Points of Presence (PoPs) as the MX will ensure connectivity.
- MX POPs are located in Markham, Toronto, Chicago, London, and New York.
- > Participants will not be required to make network, DNS, or IP changes in order to connect to the MX DR site during the tests.
- MX will provide bids and offers for instruments. Participants will be able to lift or hit MX market. Firm IDs (mnemonic) representing the MX will be 901 and 902.
- During the exercise MX will be sending periodic status emails.

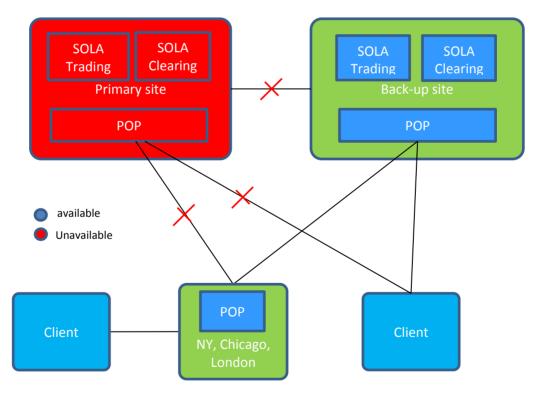


Figure 3

Scheduled testing appointments are not needed. If required, the Technical Help Desk (THD) and TMX Group IT support staff will be on-site and available to assist.

Please note: Tests will only be considered conclusive if a participant has executed at least 2 trades during the post-failover.

Once your tests have completed, please send an email to DR-BCSupport@m-x.ca with the following:

Participation to: FIA and/or SIFMA Firm name and ID: ABC / BDM004

Application tested: ATR, TMS, HSVF, etc.
Successful trade on: BAX, SXF, SXO, ABX or BCE

Comments: Describe any issues you may have encountered during the test, including how

they were resolved or if further investigation is required.

Upon conclusion of our testing window at 1:30 pm EDT, the Production environment will be immediately brought down and scheduled for reactivation at its regular time on Sunday, October 16, at 10:00 AM EDT. Please monitor your connections once your processes have reinitialized and report any issues or outages to the Technical Help Desk by phone at (514) 871-7872.

### Test symbols

Transaction	Security Identifier	MX price	
Type (buy/Sell)	(Symbol/CUSIP/ISIN)	Buy	Sell
B/S	BAX November 2016 BAXX16	98.05	99.99
B/S	SXF June 2017 SXFM17	850.00	870.00
B/S	SXO DC 16 920.00 Put (SXO 161216P920.00)	100.00	150.00
B/S	ABX Jan 18 27.00 Put (ABX 180119P27.00)	8.00	12.00
B/S	BCE Jan 18 44.00 Call (BCE 180119C44.00)	10.00	22.00

## MX Participants can test connectivity with the following services

SAIL	FIX	ATR
Drop Copy	TMS	Clearing API
MX FTP/SFTP Server	LOPR	HSVF (unicast &
(EOD and PAR Reports)	LOPK	multicast)

## **Test Registration**

To facilitate the coordination and appropriate level of communication on test day, please ensure to officially register working staff via the respective websites of the association or organization towards which your firm plans to participate. Please find links below:

FIA website

https://secure.fia.org/bcp/test-registration.asp

SIFMA website

http://www.sifma.org/services/bcp/industry-testing/

# Contact Information during the pre-test and test day

Technical Help Desk	Market Operations Department Test day only
Toll free: 1-877-588-8489	Toll free: 1-866-576-8836
Local: 514-871-7872	Local : 514-871-7877
DR-BCSupport@m-x.ca	

For additional information on this notice, please contact Edwige Poupart, Head of Client Services, MX Financial Markets at 514-871-3590 or at <a href="mailto:epoupart@m-x.ca">epoupart@m-x.ca</a>.

We thank you for your cooperation.

Edwige Poupart Head, Customer Relations