

**CME Group Disaster Recovery
Test Script
April 25, 2015**

Table of Contents

Important Information	3
MQ/sFTP connections	8
CME Standard Disaster Recovery Failover	8
Test Date Trade Entry – Globex Pre-Opening	8
Trade Entry and Submission to Hosted Exchanges	9
Clearing Test	10
Communication to CME Group during the Test	11
End of Test	11

Important Information

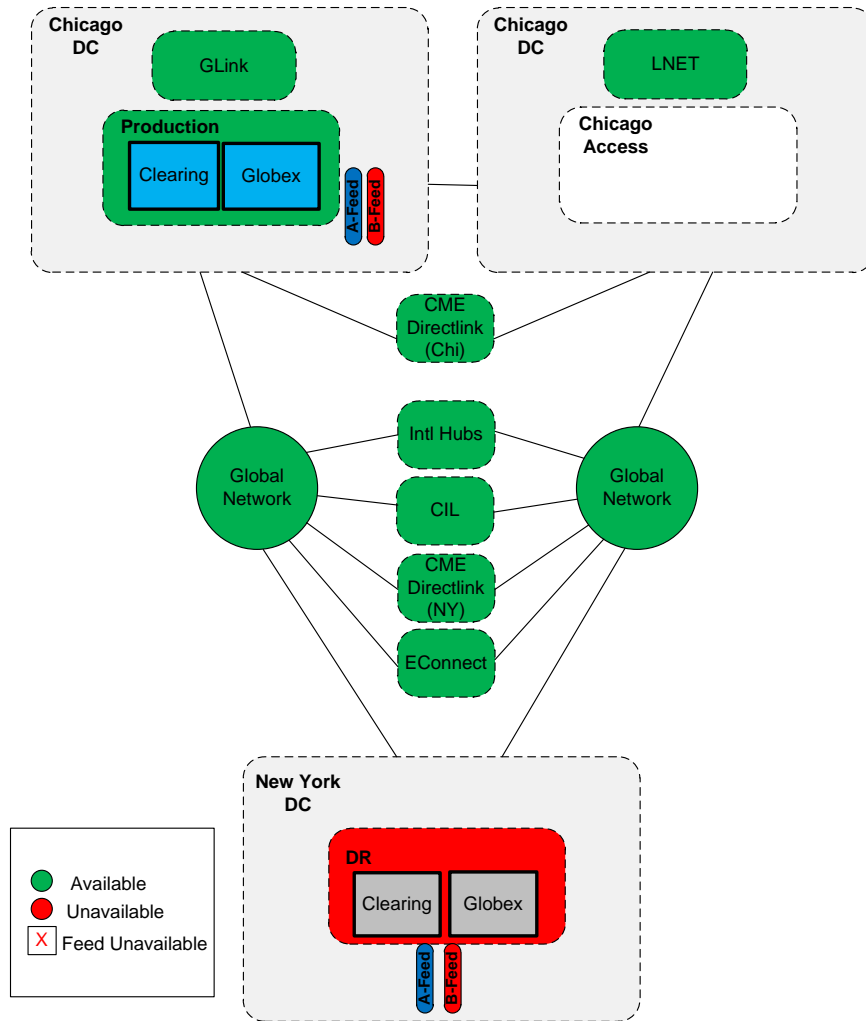
On Saturday, April 25th the CME Group will be executing a Clearing & Globex DR exercise. The test will begin at 9:00am EDT and end at 3:00pm EDT. CME Group represents the merged CME, CBOT, NYMEX/COMEX and KCBT exchanges; therefore, CME Group will execute one test that includes all entities from the aforementioned exchanges.

All participants are encouraged to call into the Customer facing Conference Bridge, beginning at 9:00 a.m. EDT and end at 3:00 p.m. EDT.

- Inside US: 877.979.3898
- Outside US: 404.410.4584
- Passcode: 6485475

Network Description of Production Operations and Outlined Scenarios

During normal operations, all CME Globex and Clearing applications and environments run out of the primary data center. This facility also houses CME Group Co-Location. All global customer connectivity is routed back to this facility via the CME Group network. The disaster recovery facility will be unavailable for any CME Group applications.



Test Scope: Disaster Recovery Scenarios

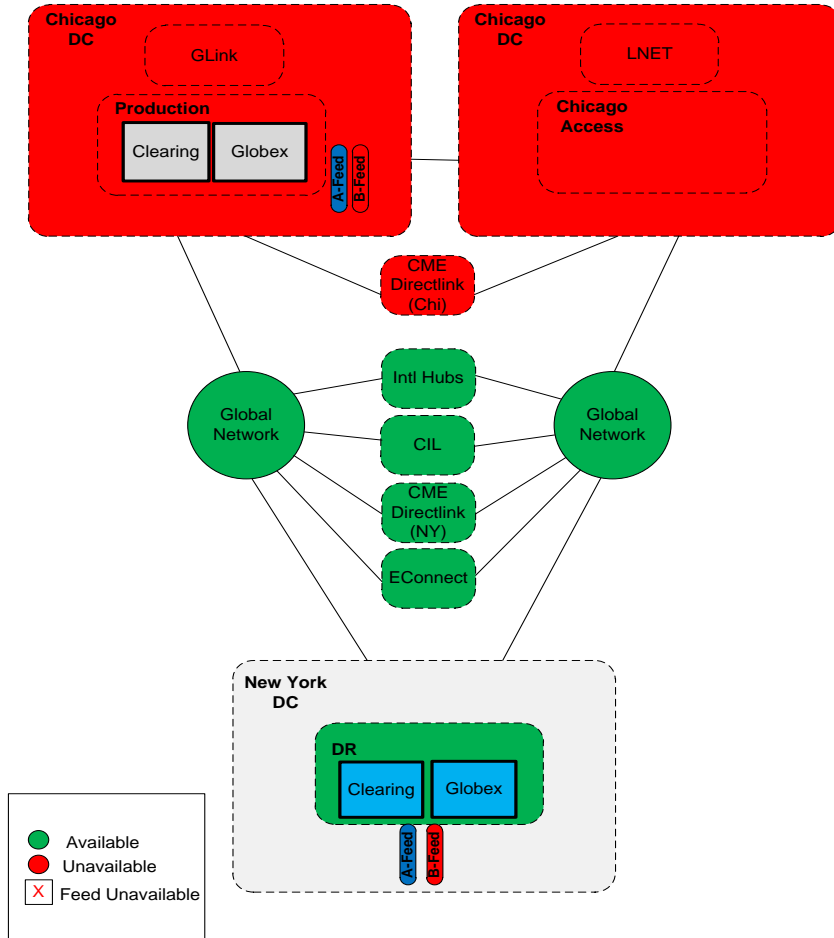
The primary Chicago data center houses all CME Group production applications, CME Globex, and Clearing as well as Co-location services. The out-of-region data center houses Disaster Recovery (DR) services and will be accessible via the network depending on the failure scenarios highlighted in the following 3 scenarios. **Customers connect to both production and DR applications via the same IP addresses.**

This topic highlights the potential scenarios that could impact customer connectivity during a disaster in Chicago. In all 3 scenarios, both Clearing and Globex will be available via the disaster recovery facility.

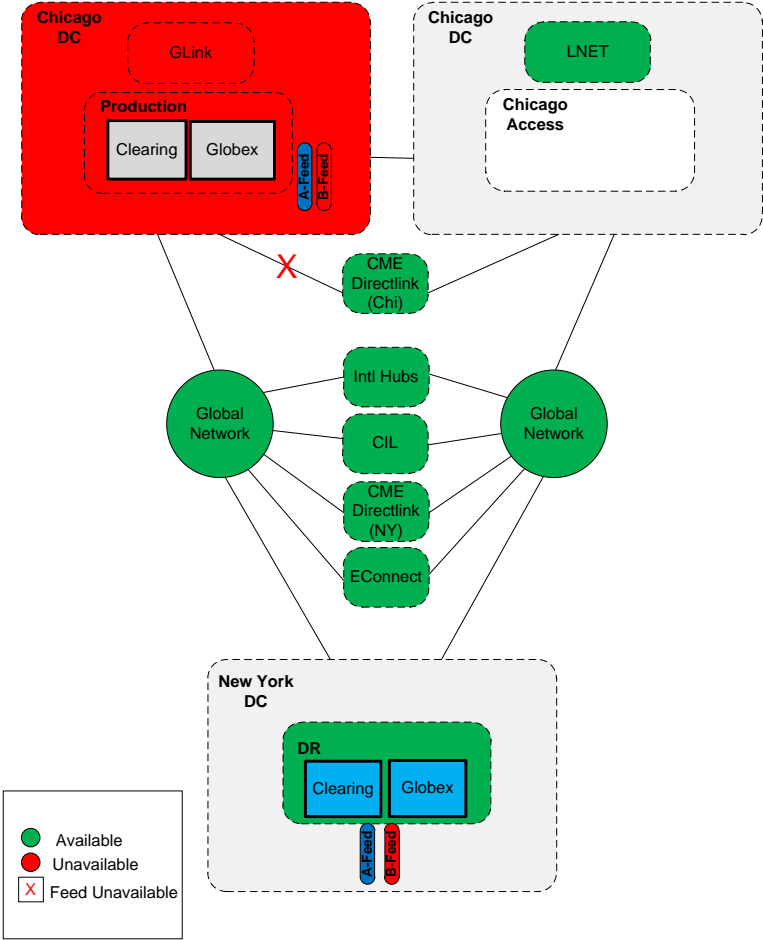
Scenario 1: In Region: Chicago Metropolitan Disaster: All CME Group Chicago area datacenters are down and customers will be re-directed to the disaster recovery facility. **Note:** GLink and LNET are out of scope in this first scenario, firms submitting test trades during this window would need to utilize their back-up order routing facilities. Customer connectivity that is

not dependent on Chicago data centers will be maintained; there will be no changes required by these customers.

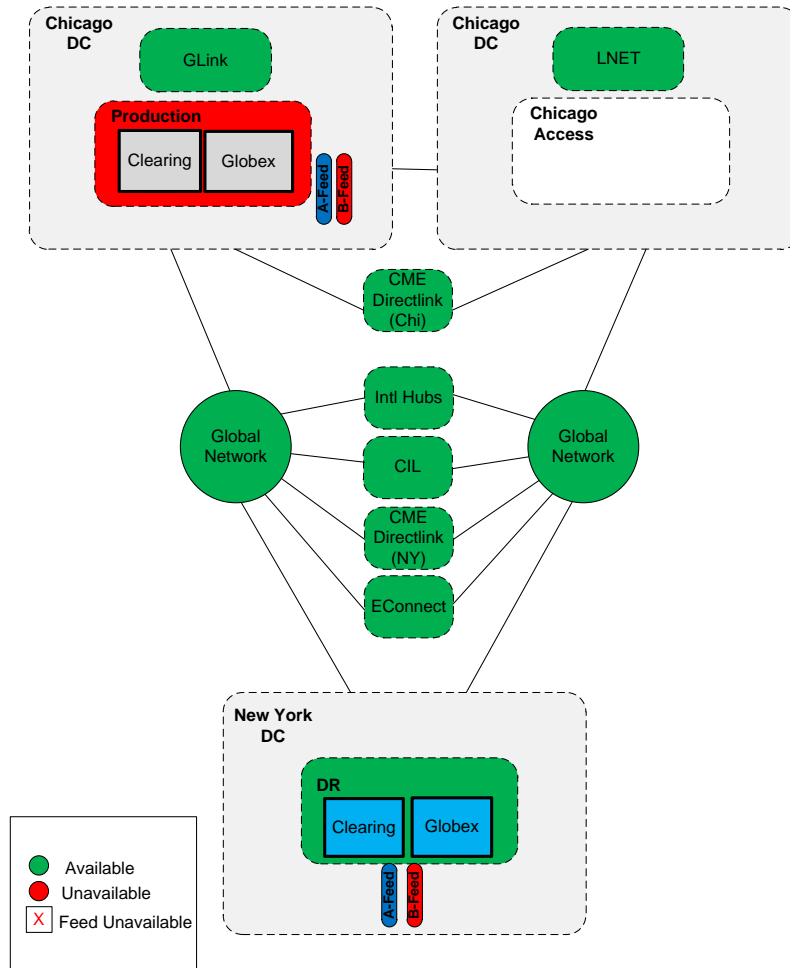
This scenario will run for approximately the first 2 hours of the test window (9am to 11am EDT). (Test window duration is 6 hours total 9 am to 3 pm EDT)



Scenario 2: Primary Data Center Failure: the CME Group’s Primary datacenter is down, customers are re-directed to the disaster recovery facility. Other than GLink which is housed in our primary data center all other methods of customer connectivity will be maintained. **Note:** **GLink remains out of scope**, firms submitting test trades during this window would need to utilize their back-up order routing facilities. **LNET has been restored** and firms utilizing LNET can test MQ connectivity during this window. This scenario will run during the second 2 hours of the test window (11am to 1pm EDT). (Test window duration is 6 hours total 9 am to 3 pm EDT)



Scenario 3: Primary Data Center Production Room Failure: Co-location Services Available - only the applications and production environment are disabled in the CME Group primary data center. Customers are re-directed to the disaster recovery facility. All method of customer connectivity will be maintained. **Note: GLink has been restored**, firms submitting test trades during this window can now utilize their primary order routing facilities. **LNET remains restored** and firms utilizing LNET can test MQ connectivity during this window as well. This scenario will run during the final 2 hours of the test window (1pm to 3pm EDT). (Test window duration is 6 hours total 9 am to 3 pm EDT)



Test Day Support:

- CME Group will fully staff the GCC at our remote site(s)
 - New GCC Hotline numbers are: U.S. at +1 800 438 8616, in Europe at +44 800 898 013 or in Asia at +65 6532 5010
- The GCC will be used as the main point of contact for all test participants.
- CME Group requests that the Firms call the GCC if they experience any issues attempting to connect front or back end systems.
 - Upon completion of the testing, Firms are asked to call the GCC. The GCC staff will record the firm's completion. Additionally, please complete the CME DR Results form found on the registration page, or contact the Business Continuity team at BCP@cmegroup.com to obtain a copy. Results and comments will be captured to create an overall results report. No Firms' names will be used in the report.

Participating firms are encouraged to contact the support team at BCP@cmegroup.com with any questions you may have prior to the test, during the test or following the test.

Detailed information pertaining to the front-end Globex trading system and the back-end Clearing system can be found in the associated sections of this document.

MQ/sFTP connections

MQ connectivity Network Requirements Your existing network configuration will remain intact. Firms should continue to point their respective PROD or DR systems to the normal CME Group Production MQ IP address and the CME will re-route internally to the CME DR environment.

sFTP Access: Firms will test their sFTP connection, utilizing the Production IP address, on the same pre-test date they designate on the FIA registration form. No IP address changes are necessary on the firm side and the CME Group will have network support available on both pre-test dates.

Important: Please contact CME client services group at 312-207-2525 or ccs@cmegroup.com to obtain/clarify the IP addresses for both MQ & sFTP used during testing.

CME Standard Disaster Recovery Failover

CME Group will failover Globex and Clearing supporting systems per its standard disaster recovery failover procedures. We expect this to be completed by 9:00am EDT on the morning of the test. CME Group will announce when the DR Systems (GLOBEX & Clearing) will be ready and in an Open state on the FIA Conference call.

Test Date Trade Entry – Globex Pre-Opening

On the day of the test, the back-up Globex system will be available; there is **no Pre-Opening state on Saturdays.** We anticipate that the system should be available at approximately 9:00am EDT that day.

Trade Entry and Submission to Hosted Exchanges

Trades entered into Globex during the exercise will be processed through to the appropriate hosted clearing organization.

Valid Trade date will be April 24th

Trade Entry – Entering Test Trades into Globex

Valid Trade date will be April 24th

Enter bids as “customer” and offers as “house” at the settlement price in the market you choose. Enter about 10 trades. **Firms can enter trades utilizing iLink, EOS, CME Direct on a Globex product, CME Direct Block.**

Firms may use any market they want. We do recommend that Firms send orders on Floor Only Contracts, like the SPM5 that will be listed on GLOBEX for the test.

Firms may receive crossed trades and/or trades with other counterparties.

Trade reporting to firms’ back office systems should be verified and then deleted.

Clearing Test

Component I – Clearing Connectivity:

To execute the test script, please make the following three connectivity implementations. You can gather the necessary information via the CME Group Clearing Services (CCS) team at (312) 207-2525.

1. **MQ Messaging:** Firms can test from either their Prod or DR systems to the normal CME Production IP address, CME will reroute internally to CME back-up systems.
2. **sFTP:** Firms should continue to point to the Production sFTP address and the CME will reroute internally to the back-up site.
3. **Front End Clearing (FEC)/Portal:** On your regular site: (<http://connect.cmegroup.com>) select the **DR Application tab**, noticing the yellow background color. Use the same User ID and Password that you use in the production environment.

Component II – EX-Pit (Block Trade) Entry:

1. Log in to the **Front End Clearing** application **on DR tab**.
2. Access the Block Trade Entry screen and enter the following trade and hit the **Save** button:
 - o 5000 EDM5 xxxx.00
3. Conduct a **Normal Search**. Using **Search Type Block** verify that the trades you entered are in the system.

Component III – PCS, CGM, & Large Trader Reports:

1. Please FTP the PCS (**PCS.CMF_999.xml**) CGM (**CGM.xxx.01.xml**) and Large Trader (**PFTP.F999RPS.DATA**) files from either Thursday, April 23, 2015 or Friday, April 24, 2015.

Component IV –Trade Registry Data File & SPAN File:

1. After CME Group receives your PCS , Large Trader, and CGM files, we will make available Thursday's Trade Registry Data File and the SPAN file.

Trade Registry file name: FIXML-xxx_zzz_EOD-yyyyddmm.xml.zip

Where xxx is the firm number, and zzz is the exchange (CME, CBT, NYMEX)

Span file name: cme.s.pa2, cme.s.pa2.zip, cme.c.pa2, cme.c.pa2.zip, cme.date.s.pa2.zip, and cme.date.c.pa2.zip

1. After verifying receipt of these files please delete them, **revert your systems back to your Production**, complete the results form (available via the CME registration page or by contacting the BCP team at BCP@cmegroup.com) and then call the GCC (U.S. at +1 800 438 8616, in Europe at +44 800 898 013 or in Asia at +65 6532 5010) to recap the test results.

Communication to CME Group during the Test

Firms have several avenues to contact CME Group staff before, during or after the test. They can contact:

- The BCM team via email using BCP@cmegroup.com or via the Clearing customer bridge line
- The GCC in the U.S. at +1 800 438 8616, in Europe at +44 800 898 013 or in Asia at +65 6532 5010.
- The CME Group Clearing Customer Support (CCS) team at (312) 207-2525.

End of Test

Upon test completion firms should contact the GCC at U.S. at +1 800 438 8616, in Europe at +44 800 898 013 or in Asia at +65 6532 5010 acknowledging test completion.