

# CME Clearing

## Clearing Communications Requirements - General Information

### A. REMOTE DATA TRANSMISSION OVERVIEW

The CME can accept data *from* and send data *to* several types of TCP/IP devices. This document relates to transmissions associated with trade and position data. The types of data, which the CME receives and transmits, are:

- **To the Exchange:**

- 1) FIXML Trade and Give-up Records via MQ
- 2) Batch Files with Position and Regulatory Data via our secure FTP server.

- **From the Exchange:**

- 1) FIXML Confirmation and Give-up and Change Records via MQ
- 2) Various Trade, Position, Margin, Settlement, Contract and Broker & Give-up Billing data files via the clearing FTP server.
- 3) Print Reports related to Clearing, Position Management, Give-up/TelCom and Broker Billing.

### B. GENERAL COMMUNICATION REQUIREMENTS

The requirements for processors communicating with the CME servers as follows:

- 1) The device must be able to communicate to our mainframe using **TCP/IP protocols**. This is required for MQ real-time data transmissions.
- 2) The device must be able to execute GETS and PUTS to our FTP server.
- 3) The device must allow the CME to send print files via VPS to firm print queues/servers or IP printers.
- 4) All connections **must be via the CME Consolidated Network. Which is a frame relay network, managed by AT&T with a** minimum bandwidth of 128kb?
- 5) Firms are expected to establish access to both our primary site in Chicago and our Remote Data Center.

➤ **Ordering data circuits**

- 1) The CME will arrange for installation and maintenance of all related circuits and routers in conjunction with our vendor AT&T.
- 2) Firms will be required to complete **Special Schedule 5** documents, (see appendix) which authorizes the CME to order the specified circuits, arrange for installation of the circuits and routers and set-up billing arrangement. *Special Schedule 5 documents must be submitted to the GLOBEX Services Department at the CME.*
- 3) All circuit installation business is administered by the CME GLOBEX Services Department (312) 634-1594.

➤ **Current Firms on CME GLOBEX Network**

- 1) Those firms who currently connected to CME network for Globex trading, can utilize part of this connectivity to clearing firm's processors and any other devices that are a part of the network connection and that support the application data. Firms also need to confirm the number of IP addresses we will need to assign to your firm.

### Notes about firm DR Sites:

*All* firms are expected to have a back-up or disaster recovery sites your firm must have a connection from that location to the CME in addition to their primary location.

## **Networking Requirements**

The CME **expects firms to perform the NAT of their IP addresses**, so that you appear to us as a 172.21.xx.xx or 172.20.xx.xx address. This is the standard for CME's AT&T frame relay network.

Following is our IP address standard

**Eth IP/Default Gateway:** 172.21.xx.xx or 172.20.xx.xx

**1<sup>st</sup> IP address to use in the Range:** 172.21.xx.xx or 172.20.xx.xx

**Range to:** 172.21.xx.xx or 172.20.xx.xx

**Subnet Mask:** 255.255.255.224 (/27 bit mask)

Clearing Firms Must set up IP routes to the following Networks:

66.54.251.217 (CME's Chicago data center)

204.167.179.208 (CME's Remote data center)

FTP 198.212.155.45

## **Multiple IP Addresses**

Firms are required to tell us if they **require more than one IP address** for any of the applications or if we are communicating to more than one device. For example, MQ may be running at a second site, or we may need to route reports to your print queue and a separate printer.

## **Testing MQ Channels:**

You should expect to first ping test your network access and then the application access during your migration. For MQ we will test your access to both the test Certification/New Release and Production channels. Once your tests are successful, you will remain on the consolidated network.

## **SYSTEM CHANGES/UPGRADES**

The following system upgrades **must** be tested with CME Clearing **at least 3 days** prior to implementation:

New AS400 (or other) hardware installation

Operating system or MQ upgrades

FTP changes

## **FAILURE TO TEST BEFORE AN UPGRADE WILL PUT YOUR FIRM AT RISK FOR THE FOLLOWING PROBLEMS:**

MQ Sequence numbers out of sequence

Communication problems between firm and CME Clearing

## **TESTING SCHEDULE REQUIREMENTS**

Firms can conduct testing with CME Clearing on Monday through Friday, **before** the weekend conversion, between the hours of 8:00 a.m. and 5:00 p.m. Chicago time. Testing will not be available in Certification on Tuesday afternoon starting at 12 noon and in New Release on Wednesday afternoon starting at 12 noon. Both days are scheduled maintenance days for both regions.

Firms that cannot test their Production on weekdays can test it on the weekend **prior to the conversion**.

Firm can only perform an MQ ping test; no messages will be set or received on the MQ lines.

## **Websphere MQ MESSAGING FOR TRADE DATA SUBMISSION**

CME Clearing uses IBM's Websphere MQ software to transmit trade data **from** and **to** clearing member firms. MQ allows firms to transfer data back and forth from the CME on a **real-time** basis. FIXML standards are currently used to send and receive GLOBEX electronic and non electronic confirmation records.

**A. Purchasing software**

Firms purchase the MQ software program and upgrades directly from their software provider...

**B. MQ queue/channel definitions**

Firms using MQ for the first time must provide the Firm Local Queue Manager Name to the CME. CME will assign an MQ USERID and group id. The Local Queue Manager Name is **defined by the firm or service bureau** i.e.: R&N, Sungard, Ubix ...etc. If you have a disaster recovery processor, you should use the same Local Queue Manager Name as the primary processor.

If your firm wants to change its MQ queue manager name, you must notify the Client Management in writing, at least one week in advance.

The **CME assigned** MQ userid is comprised of the letter F followed by the 3 digit clearing firm number and three unique alpha characters as in the following example: **F###AAA**. The **CME assigned** group id is part of the channel name and is comprised of 2 alpha characters and two digits. The two digits are usually 07 (certification/new release) or 06 (production).

**C. Submitting an MQ Request Form**

If your firm is using MQ for the first time or switching from a facilities management firm that previously submitted your trade data you must request an MQ USERID by completing a CME Firm MQ Definition Request Form, *The completed form must be returned to **mqsupport@cmegroup.com**.*

The CME will process your request within 24-48 hours and reply with the queue and channel names you will need to define. A TRADOUT and TRADIN queue must be built in the production environments and for testing in both the certification and new release environments.



**To be completed by CME**

Once CME has received your request, you will be assigned a userid and group id. You can then define queues using the userid as part of the queue name as illustrated below. You will also define channels using the assigned group ID as part of the channel name.

CME Assigned USERID: \_\_\_\_\_

CME Assigned GROUP ID: \_\_\_\_\_

Do not define these queues and channels until CME has provided you with a userid and group ID.  
**ALL DEFINITIONS BELOW MUST BE ENTERED IN UPPER CASE**

**MQ Production Definitions:**

Firm's sender channel name: yy06\_TO\_MPRD send to 66.54.251.244  
Local Receive Channel Name: MPRD\_TO\_yy06 CME source address is 66.54.251.217  
Local Receive CME FIXML Trade Queue: PDCS.zzzzzzzz.TRADOUT.FIXML  
Remote FIXML Queue Name: PDCS.zzzzzzzz.TRADIN.FIXML  
Remote Message Queue Mgr: PDCS.QMGR

**New Release Env Definitions:**

Firm's sender channel name: yy07\_TO\_MCRT send to 66.54.251.252(1415)  
Local receive Channel Name: MCRT\_TO\_yy07 CME source address is 128.177.22.37  
Local Receive CME FIXML Trade Queue: CDCS.zzzzzzzz.TRADOUT.FIXML  
Remote FIXML Queue Name: CDCS.zzzzzzzz.TRADIN.FIXML  
Remote Queue Manager: CDCS.QMGR

**Certification Env Definitions:**

Firm's sender channel name: yy07\_TO\_MQC5 send to 66.54.251.252(1417)  
Local Receive Channel Name: MQC5\_TO\_yy07 CME source address is 128.177.22.36  
Local Receive CME FIXML Trade Queue: CDC5.zzzzzzzz.TRADOUT.FIXML  
Remote FIXML Queue Name: CDC5.zzzzzzzz.TRADIN.FIXML  
Remote Message Queue Mgr: MQC5.QMGR

**Sender/Receiver sequence wrap must be 999999999 (that's 9 nines)**

**Explanatory Notes:**

1. **yy=CME assigned Group ID**
2. **zzzzzz=CME assigned USERID**
3. IP addresses for Certification and New Release are the same, but they have different port numbers. This is coded in the connection name of the sender channel definition.
4. Sender & receiver channel names include the firm's Group ID (assigned by CME) and also a 4 character CME environment id:
  - MPRD production
  - MQC5 certification
  - MCRT New Release
5. For Disaster Recovery, you will point your production sender channel to 204.167.179.250 and you will need to permit CME to send from source ip 204.167.179.208.

## CME FTP File Transfer Protocol (FTP) Guidelines

CME Clearing requires member firms to submit and receive data files using our secure FTP.

### Security Access Procedures:

FTP: 198.212.155.45. Production.

FTP: 204.167.179.210 RDC.

### FTP user id and password

*For security reasons, there is no standard format to the passwords. There are multiple redundant FTP servers that utilizes with the same IP address, so in the event of a failover, firms do not need to make any change on their side.*

**Firms should try a ping test and send/receive files to the server as soon as they receive their user id and password. If you are unable to access the server, please contact CME Clearing and they will facilitate resolution with one of our network engineers.**

### FTP Directory Names:

Once a firm has accessed the FTP server, they will either go to the Incoming directory to PUT files to the CME, or the Outgoing directory to GET files from the CME. The directory names are:

/cme/ftp/FIRM#/Incoming

/cme/ftp/FIRM#/Outgoing

### INCOMING DATA TO THE CME

Firms that send data files to the CME will PUT those files to our Incoming directory located on the FTP server. In order to ensure that the files are forwarded on to the mainframe correctly, with the exception of PCS file submission, please follow these dataset-naming guidelines and do not enter any" quote marks" around the dataset names:

#### FTP Dataset Naming Guideline: XFTP.FXXXXXX.DATA

Example: P(or T)FTP.F123REL.DATA

**P** - Production or **T** for Test file

**FTP** - File transfer

**F123** - Firm(XXX)number

**REL.DATA:** Related Account data

**RPS.DATA:** 25+over Reportables (Large Trader) (this was previously listed as REP)

**Please note: for PCS.** (Position Change Submission) data file submission, please use PCS.CMF\_123.xml where 123 is the firm id.

### OUTGOING DATA FROM CME Clearing

The CME will send data files to our firms, by putting those files in our **Outgoing** directory located on the FTP server. Firms will come and GET these files when they are ready to retrieve. Please note that these dataset-naming guidelines will be used by the CME for each of our data files. **A complete list of all data files with their corresponding dataset names is attached.**

#### FTP Dataset Naming Guideline: fXXX.cmedata.XXXX

FXXX= F123 ( F and the firm number)

#### CMEDATA

XXXX=Id for the data files such as: **pgps**

For example:

The Preliminary GPS(Giveup Payment System) file dataset name would be:**f123.cmedata.dgps**

### FTP Server File Deletions

The CME will delete daily data files from the FTP server per the following schedule:

Daily Files (SPAN, Settlement, FIXML Register, GPS, etc.) 2:00 p.m. Monday-Friday

**FTP Printing Options** : *Network port 515 must be open to receive print data.*

Have CME send the print file, via VPS software directly to an IP printer OR a print server or print queue on your AS/400 using IP addressing.

The IP address of the printer must be submitted in advance to the CME  
The firm must specify if we are routing to a printer, print server/ print queue.

**For all clearing testing arrangements and system issues please Contact CME Clearing** at 312 207 2525