| ISE Mercury™ Technical Bulletin |                  |            |              |  |
|---------------------------------|------------------|------------|--------------|--|
| Bulletin number:                | 2015-02          | Contact:   | Joe Maresca  |  |
| Date:                           | January 22, 2016 | Telephone: | 212-897-8158 |  |

This bulletin is to inform members of connectivity requirements to participate in ISE Mercury.

## **Connecting to ISE Mercury**

Members can use their existing connectivity to ISE and ISE Gemini for ISE Mercury provided the current bandwidth is sufficient to support data from all three exchanges.

Bandwidth requirements for ISE Mercury are provided below in this bulletin.

New members, or current members who want to upgrade their connectivity, should refer to the *Member Connectivity Guide*, ver. 3.0.0 (or higher) for complete information and procedures.

### **Datacenters**

ISE Mercury is located in the same datacenters as ISE and ISE Gemini.

**Table 1: ISE Data Centers** 

| Equinix NY4 (Primary Data Center)                          | Equinix CH1 (Disaster Recovery Data Center)                               |
|--|---|
| 755 Secaucus Road<br>Secaucus, NJ 07094<br>NPA/NXX:201/422 | 350 East Cermak Road<br>5th Floor<br>Chicago, IL 60616<br>NPA/NXX:312/922 |

### **Unicast - Production**

### **Direct Trading Interface (DTI)**

ISE Mercury has dedicated DTI Unicast IP addresses and ports.

Existing ISE or ISE Gemini market makers (MMs) and electronic access members (EAMs) will require a new Business Unit (BU) in order to quote or route orders in ISE Mercury.

#### **ISE FIX Order Routing System (IORS)**

IORS users will require a new FIX session to route orders to ISE Mercury.

### **Market Data Interface (MDI)**

ISE Mercury supports all existing market data feeds including, Top Quote, Depth, Spread, Order, Ticker and Reference data feed. All market data feeds will be disseminated on separate multicast channels in binary format only.

<u>PrecISE</u> Existing PrecISE users can leverage their current BU and account to route orders to all three exchanges. PrecISE access to ISE Mercury is available through the Away Market Routing functionality.

Table 4: Unicast IP Addresses & Ports — Production

| Envt                      | IP Address  | Interface                                  | Port(s)   |  |
|---------------------------|---|--|---|--|
|                           | 207.231.197.5   | VIP for DTI Interface (All<br>Members)     | 20081 / 20082<br>NOTE: DTI sessions should be<br>split between ports. |  |
|                           | 207.231.197.6   | VIP for Prem. Access<br>Connection Gateway | 20083   |  |
| Primary<br>Equinix NY4    | 207.231.196.64/27   | Subnet for Prem. Access DTI interface      | 20091/20092   |  |
|                           | 207.231.196.192/26  | Subnet for Dedicated gateways              | 20091/20092   |  |
| Pri<br>Equi               | 207.231.197.37  | Vip for PrecISE                            | SSL 443   |  |
|                           | 207.231.197.38  | VIP for FIX (IORS) Interface               | Member-specific   |  |
|                           | 207.231.197.39  | Member FTP VIP                             | N/A   |  |
|                           | 74.120.84.126   | VPN Peer1-IPSEC Primary                    | N/A   |  |
|                           | 74.120.84.118   | Internet PrecISE                           | SSL 443   |  |
|                           | 74.120.86.199   | VIP for DTI Interface (All<br>Members)     | 20081 / 20082   |  |
| DR<br>ak                  | Premium Access is not available at 350 Cermak, Chicago,II |  |   |  |
| Backup / DR<br>350 Cermak | 74.120.86.200   | VIP for PreciSE                            | SSL 443   |  |
| Back<br>350               | 74.120.86.209   | VIP for FIX (IORS)                         | Member-specific   |  |
|                           | 74.120.85.66  | Internet PrecISE                           | SSL 443   |  |
|                           | 74.120.86.201   | Member FTP VIP                             | N/A   |  |

**NOTE:** IP addresses in this bulletin are accurate as of the date of publication. The *Member Connectivity Guide* provides up-to-date IP address information.

### Market Data Multicast IP — Production

ISE Mercury market and reference data are disseminated on separate multicast IP/Port channels. Source and Rendezvous Points (RPs) can be found in the MDI Programmers manual on the member's website.

All ISE Mercury market and reference data feeds will be in **binary** format only. There will not be **FAST** format feeds on ISE Mercury.

For the list of ISE Mercury market and reference data channels, refer to the *MDI Programmers Manual*, ver. 10.0.10 (or higher).

# **Bandwidth Requirements (Unicast and Multicast)**

The bandwidth numbers below are a baseline for provisioning purposes only and are subject to refinement based on ISE's trading system requirements. If participating in all three exchanges, the aggregate bandwidth can be found in the *Member Connectivity Guide*.

### Unicast

Table 5: Unicast Bandwidth Requirements — Production

| Interface     | Unicast ISE Gemini Bandwidth Requirements  |
|---------------|--|
| DTI Interface | 50Mb (Minimum) Market Maker Quote Entry. Bandwidth used will be determined upon membership status (PMM/CMM/EAM) and subscriptions. |
| Fix Interface | 56K Per Fix session  |
| PrecISE Trade | 56K Per Fix session  |

### Multicast

Multicast Bandwidth Requirements — Production

|                      | ISE Mercury<br>Requirements/stream |          |
|----------------------|------------------------------------|----------|
| Feed                 | A Stream                           | B Stream |
| Top Quote Feed       | 800 Mb                             |          |
| Depth of Market Feed | 2000 Mb                            |          |
| Order Feed           | 15Mb                               |          |
| Reference Data       | 250Mb                              |          |
| Spread Feed          | 220Mb                              |          |
| Trade Feed           | 10Mb                               |          |

**NOTE:** Members must also calculate total bandwidth if participating in all three exchanges.

### **Further Information**

If you have any questions regarding this bulletin, please contact ISE Network Engineering at (212)897-8158 or write to jmaresca@ise.com

For documentation and the latest information regarding ISE's trading system, please login to our secure Members Area website at <a href="https://members.ise.com">https://members.ise.com</a>.