### Multicast services \& Access

#### INET ITCH Multicast Equities only (1G Co-location)

- **Protocol / Service:** FIX Order Entry (DE)
  - Source IP address: 159.79.136.0/21
  - Destination IP address: 193.142.170.0/23
  - Port: 13100
- **Protocol / Service:** FIX OE Drop (Incl. Algo Child Order Drop)
  - Source IP address: 159.79.136.0/21
  - Destination IP address: 194.110.10.0/23
  - Port: 18740
- **Protocol / Service:** FIX Trade Reporting (TR)
  - Source IP address: 159.79.136.0/21
  - Destination IP address: 194.110.110.0/23
  - Port: 19100
- **Protocol / Service:** FIX TR Drop
  - Source IP address: 159.79.136.0/21
  - Destination IP address: 194.110.110.0/23
  - Port: 19740
- **Protocol / Service:** OUCH (Dedicated Gateway)
  - Source IP address: 159.79.136.0/21
  - Destination IP address: 194.110.104.0/23
  - Port: 16200
- **Protocol / Service:** OUCH (Dedicated Gateway, colo only)
  - Source IP address: 159.79.136.0/21
  - Destination IP address: N/A
  - Port: 16200-16250

#### INET ITCH Multicast Equities & Warrants (1G Co-location)

- **Protocol / Service:** Multicast services - Co-location 1G Access
  - **Secondary/Failover for ports (list below)**
  - **Primary - A Flow**
    - Source IP address: 159.79.85.1
      - Destination IP address and port in (within subnet 159.79.85.0/28)
      - Port: 13100
  - **Secondary/Failover (Site B) - B Flow**
    - Source IP address: 159.79.85.1
      - Destination IP address and port in (within subnet 159.79.85.0/28)
      - Port: 13100

#### INET ITCH Multicast Equities only (1G Dual Site)

- **Protocol / Service:** Source IP address: 159.79.85.1
  - Destination IP address and port in (within subnet 159.79.85.0/28)
  - Port: 13100
  - **Rendezvous Point (RP) - PIM-SM join message**
    - Source IP address: 159.79.85.1
      - Destination IP address and port in (within subnet 159.79.85.0/28)
      - Port: 13100

#### INET ITCH Multicast Equities only (1G Dual Site)

- **Protocol / Service:** Source IP address: 159.79.85.1
  - Destination IP address and port in (within subnet 159.79.85.0/28)
  - Port: 13100
  - **Rendezvous Point (RP) - PIM-SM join message**
    - Source IP address: 159.79.85.1
      - Destination IP address and port in (within subnet 159.79.85.0/28)
      - Port: 13100

#### INET ITCH Multicast Equities only (1G Dual Site)

- **Protocol / Service:** Source IP address: 159.79.85.1
  - Destination IP address and port in (within subnet 159.79.85.0/28)
  - Port: 13100
  - **Rendezvous Point (RP) - PIM-SM join message**
    - Source IP address: 159.79.85.1
      - Destination IP address and port in (within subnet 159.79.85.0/28)
      - Port: 13100

### Multicast services - Co-location INET

#### INET ITCH Multicast Equities only (1G Co-location)

- **Protocol / Service:** Source IP address: 159.79.85.1
  - Destination IP address and port in (within subnet 159.79.85.0/28)
  - Port: 13100
  - **Rendezvous Point (RP) - PIM-SM join message**
    - Source IP address: 159.79.85.1
      - Destination IP address and port in (within subnet 159.79.85.0/28)
      - Port: 13100

### Multicast services - Co-location INET

#### INET ITCH Multicast Equities only (1G Co-location)

- **Protocol / Service:** Source IP address: 159.79.85.1
  - Destination IP address and port in (within subnet 159.79.85.0/28)
  - Port: 13100
  - **Rendezvous Point (RP) - PIM-SM join message**
    - Source IP address: 159.79.85.1
      - Destination IP address and port in (within subnet 159.79.85.0/28)
      - Port: 13100

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For protocols where only subnet is specified, the specific IP address will be included in each member's account details available via Member Portal or from operator@nasdaq.com.
<table>
<thead>
<tr>
<th>MultiCast Services</th>
<th>A Flow</th>
<th>C Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INET NLS Multicast (TG Co-location)</strong></td>
<td>Source IP address: 159.79.85.18 (within subnet 159.79.85.16/28)</td>
<td>Source IP address: 159.79.85.27 (within subnet 159.79.85.16/28)</td>
</tr>
<tr>
<td>Rendezvous Point (RP) - PIM-SM join message</td>
<td>IP Multicast group address: 233.74.125.128 UDP port: 31028</td>
<td>IP Multicast group address: 233.74.125.129 UDP port: 31029</td>
</tr>
</tbody>
</table>

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