Securities Industry Automation Corporation
11 Wall Street, New York, NY 10005

July 5, 2022

To: OPRA Multicast Data Subscribers

Subject: OPRA Capacity Testing - **July 23, 2022 Reminder**

The OPRA Participants have updated their traffic projections based on messages per 100-millisecond (MPHM) intervals. The use of a 10-millisecond interval reflects system utilization during bursts of traffic. The bandwidth required to receive OPRA data is reflected in Gigabits.

Please note that the traffic projections are for **one stream only**. For fault tolerance purposes, two redundant streams of data are available from SIAC. For those Multicast Data Subscribers who elect to receive both streams of data, the bandwidth requirements would be double.

SIAC will provide Saturday capacity testing opportunities three times a year to allow Multicast Data Subscribers to validate processing OPRA projected maximum output traffic rates.

All OPRA Multicast Data Subscribers are invited to participate in capacity testing occurring on the same dates as the SIP Failover tests as follows:

- 7/23/2022 - from approximately 12:00pm - 1:00pm ET
- 12/3/2022 - from approximately 12:00pm - 1:00pm ET

The maximum output traffic rates for OPRA data services will be as follows:

Capacity Projections

Effective Date	100-Milliseconds			10-Milliseconds			Total Messages Per Day (billions)	Maximum Output Rate per Output Line MPHM (Thousands Msg / 100ms)
	Maximum Output Traffic Rates (Million Msg /100ms)	Bandwidth (Gigabits /100ms)	Peak Packets (Thousand packets / 100ms)	Maximum Output Traffic Rates (millions)	Bandwidth (Gigabits /10ms)	Peak Packets (Thousand packets / 10ms)		
7/2022	11.068	3.081	680	1.252	0.345	75	160	625
10/2022	11.561	3.198	698	1.307	0.360	77	172	625
1/2023	12.194	3.357	719	1.379	0.378	80	182	625
4/2023	12.624	3.459	727	1.428	0.390	82	194	625

Retransmissions

The required bandwidth should be increased by 10% to account for retransmissions.

Latency

The median latency for OPRA is under 20 microseconds. Message latency is measured beginning with the time-stamp taken as an inbound Participant message arrives at the network entrance to the OPRA environment, through processing by the system into a consolidated message for Multicast Data Subscribers, to the time-stamp taken as the outbound message arrives at the network exit from the environment. These time-stamps are taken and correlated by a process external to the data processing applications. If the external process cannot correlate an inbound message to its corresponding outbound message or measures negative latency for a message, the message is excluded from broader latency calculations such as median message latency.

Test Registration

Each OPRA Data Subscriber participating in the test should register at **CTA-OPRA-Support@siac.com**.

Data Subscribers who receive OPRA from connectivity service providers other than ICE Global Network (IGN) or the NMS Network must contact their connectivity service providers to coordinate testing.

Please note that if no Multicast Data Subscribers register for capacity testing, capacity testing **will not take place.*

Questions

Questions regarding the bandwidth requirements should be addressed to: **CTA-OPRA-Support@siac.com**. Multicast Data Subscribers can also contact the SIAC NMS Product Management Desk at 212-656-8177, Option 2. If support team members are engaged with other customers, please leave a detailed voice message of the purpose of your call, which will produce an email of your message to the support team.