



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

November 21, 2022

To: OPRA Multicast Data Subscribers

Subject: Revised OPRA Capacity Projections (including 96-Lines) and Capacity Testing Schedule

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. Capacity tests take place on the same day as OPRA failover testing.

2022 OPRA Capacity Testing Schedule

- Saturday, December 3, 2022, from approximately 12:00pm to 1:00pm ET

2023 OPRA Capacity Testing Schedule

- Saturday, April 1, 2023
- Saturday, July 22, 2023
- Saturday, December 2, 2023

As [previously announced](#), for optimal symbol balancing and line capacity utilization, OPRA will be expanding data dissemination from a 48-line to a 96-line multicast data distribution network, in Q3, 2023 (date to be determined). Capacity testing for the 96-line data distribution network will take place after select industry tests (dates to be determined.)

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 Msg/10ms)	Bandwidth (Gigabits /10ms)	Peak Packets (Thousand packets / 10ms)		
1/2023	11.561	3.198	698	1.307	0.360	77	172	625
4/2023	11.806	3.266	712	1.335	0.372	79	182	625
7/2023*	12.231	3.922	1767	1.383	0.433	163	192	625
10/2023*	12.677	4.059	1815	1.434	0.449	165	201	625

*96-Line Data Distribution Network

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.

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.