August 14, 2018

OPRA Market Data Subscribers:

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 data via your SFTI connection is reflected in Gigabits.

OPRA plans to support the updated traffic rates beginning in **January 2019**. The bandwidth required to receive data via your SFTI connection 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 be providing quarterly Saturday capacity testing opportunities to allow direct Multicast Data Subscribers to validate processing OPRA projected maximum output traffic rates.   Testing will be a half hour period dedicated to maximum packet testing, followed by a half hour period dedicated to maximum capacity rates, for the calendar periods January 2019 and July 2019. Subsequent calendar period testing will be available in future capacity tests.

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

- **3rd Quarter - 9/22/2018   from 11:30 am to 12:30 pm ET**
- 4th Quarter - 12/8/2018   from 11:30 am to 12:30 pm 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)
	Maximum Output Traffic Rates (millions)	Bandwidth Gigabits	Peak Packets (thousands)	Maximum Output Traffic Rates (millions)	Bandwidth Gigabits	Peak Packets (thousands)		
Current	7.036	2.28	710	0.795	0.258	71	30	500
1/2019	**7.564**	**2.46**	**740**	**0.855**	**0.278**	**74**	**39**	**500**
7/2019	8.249	2.68	780	0.932	0.303	78	43	500
1/2020	8.874	2.88	840	1.003	0.326	84	46	500
7/2020	9.287	3.02	870	1.050	0.341	87	48	500

Retransmissions

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

Latency

The median latency for OPRA is under 50 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 Data Recipients, 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.

Testing Coordination (Required)

To coordinate testing, and to provide verbal or written confirmation of testing (as required of all Multicast Data Subscribers), please **register for testing by e-mailing your name, organization name and phone number to: cqs-cts-opra@siac.com**

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

Indirect Data Subscribers must contact their service provider to coordinate testing.

Questions

Questions regarding the bandwidth requirements should be addressed to: CQS-CTS-OPRA@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.