

November 2, 2017

Dear OPRA Market Data Recipients:

The OPRA Participants have updated their traffic projections based on messages per 100-millisecond (MPHM) intervals. The use of the 10-millisecond interval reflects system utilization during bursts of traffic.

OPRA plans to support the updated traffic rates beginning in **December 4, 2017**. 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 Data Recipients who elect to take in both streams of data, the Bandwidth requirements would be double.

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)		
12/4/2017	7.478	2.43	680	0.845	0.274	68	40	450
7/2018	7.564	2.46	710	0.855	0.278	71	31	500
1/2019	7.899	2.56	740	0.893	0.290	74	32	500
7/2019	8.293	2.69	780	0.937	0.304	78	34	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.