



Consolidated Tape Association

Key Operating Metrics of Tape A&B U.S. Equities Securities Information Processor (CTA SIP)

CQS: Quote Feed (Tape A&B)																
Quarter	System Availability (1)	Peak Messages Per Second (thousands)	Capacity Messages Per Second (millions)	Capacity vs Peak Ratio	Peak Messages Per 100 Milliseconds (thousands) (2)	Capacity Messages Per 100 Milliseconds (thousands)	Capacity vs Peak Ratio	Peak Messages Per 10 Milliseconds (thousands)	Peak Messages Per 1 Millisecond (thousands)	Peak Transactions Per Day (millions)	Capacity Transactions Per Day (billions)	Average Latency (us) (3)	Median Latency (us) (3)	10th Percentile Latency (us)	90th Percentile Latency (us)	99th Percentile Latency (us)
1Q22	100.00%	1031	n/a	n/a	261.5	950	3.6:1	55.4	6.6	3165	20	18.0	17.3	14.9	20.5	30.5
Jan'22	100.00%	843	n/a	n/a	250.0	950	3.8:1	53.4	6.6	3165	20	18.1	17.3	14.9	20.3	30.2
Feb'22	100.00%	1031	n/a	n/a	261.5	950	3.6:1	55.4	6.6	2722	20	18.1	17.3	14.9	20.5	30.8
Mar'22	100.00%	988	n/a	n/a	250.2	950	3.8:1	54.9	6.6	2809	20	17.9	17.3	14.9	20.3	29.9
2Q22	100.00%	1015	n/a	n/a	250.1	950	3.8:1	57.7	7.6	2759	30	18.0	17.8	15.3	20.5	24.5
Apr'22	100.00%	942	n/a	n/a	228.7	950	4.2:1	52.9	7.3	2350	30	17.8	17.8	15.3	20.5	24.0
May'22	100.00%	995	n/a	n/a	248.6	950	3.8:1	57.2	7.6	2759	30	18.2	17.8	15.3	20.5	24.7
Jun'22	100.00%	1015	n/a	n/a	250.1	950	3.8:1	57.7	7.6	2336	30	17.9	17.8	15.5	20.5	24.5
3Q22	100.00%	1039	n/a	n/a	273.2	950	3.5:1	59.9	8.3	2318	30	17.9	17.8	15.3	20.5	24.2
Jul'22	100.00%	1039	n/a	n/a	260.6	950	3.6:1	57.2	8.3	2040	30	17.9	17.8	15.5	20.5	24.2
Aug'22	100.00%	889	n/a	n/a	246.0	950	3.9:1	57.9	7.9	1798	30	17.8	17.8	15.3	20.5	23.8
Sep'22	100.00%	976	n/a	n/a	273.2	950	3.5:1	59.9	8.1	2318	30	18.0	17.8	15.3	20.7	25.5
4Q22	100.00%	1170	n/a	n/a	283.2	950	3.4:1	63.5	8.2	2637	30	18.0	18.0	15.5	20.9	25.7
Oct'22	100.00%	1081	n/a	n/a	272.5	950	3.5:1	63.5	8.2	2637	30	18.0	17.8	15.3	20.9	26.0
Nov'22	100.00%	1170	n/a	n/a	283.2	950	3.4:1	60.6	8.2	2062	30	18.1	18.0	15.5	20.9	25.7
Dec'22	100.00%	999	n/a	n/a	272.6	950	3.5:1	58.0	7.8	1943	30	18.0	18.0	15.5	20.7	25.5
1Q23	100.00%	1106	n/a	n/a	278.7	950	3.4:1	58.0	7.8	2500	30	18.0	18.0	15.5	20.7	25.5
Jan'23	100.00%	1026	n/a	n/a	259.0	950	3.7:1	58.0	7.6	1569	30	18.0	18.0	15.5	20.7	25.2
Feb'23	100.00%	1101	n/a	n/a	278.7	950	3.4:1	58.0	7.8	1686	30	18.0	17.8	15.5	20.7	25.5
Mar'23	100.00%	1106	n/a	n/a	277.0	950	3.4:1	57.2	7.6	2500	30	18.1	18.0	15.5	20.7	25.7
2Q23	99.986%	986	n/a	n/a	266.4	950	3.6:1	60.7	8.1	1465	30	18.0	17.8	15.3	20.7	25.5
Apr'23	100.00%	776	n/a	n/a	266.4	950	3.6:1	59.1	7.8	1180	30	18.0	17.8	15.3	20.7	25.5
May'23	100.00%	986	n/a	n/a	261.9	950	3.6:1	60.7	8.1	1465	30	18.0	17.8	15.3	20.7	25.7
Jun'23	99.96%	681	n/a	n/a	247.0	950	3.8:1	59.7	8.0	1302	30	17.8	17.6	15.2	20.3	25.0
3Q23	100.00%	791	n/a	n/a	257.6	950	3.7:1	60.2	8.2	1450	30	17.8	17.6	15.2	20.3	24.5
Jul'23	100.00%	771	n/a	n/a	253.5	950	3.7:1	60.2	7.9	1241	30	17.6	17.6	15.2	20.2	24.2
Aug'23	100.00%	725	n/a	n/a	256.0	950	3.7:1	59.9	8.1	1450	30	17.8	17.6	15.2	20.3	25.0
Sep'23	100.00%	791	n/a	n/a	257.6	950	3.7:1	60.1	8.2	1365	30	17.8	17.6	15.2	20.3	24.7
4Q23	100.00%	951	n/a	n/a	311.1	950	3.1:1	70.2	8.7	1878	30	17.8	17.6	15.2	20.3	25.0
Oct'23	100.00%	943	n/a	n/a	311.1	950	3.1:1	66.3	8.7	1878	30	17.9	17.6	15.2	20.5	26.1
Nov'23	100.00%	951	n/a	n/a	302.1	950	3.1:1	64.4	8.5	1466	30	17.7	17.6	15.2	20.3	24.7
Dec'23	100.00%	795	n/a	n/a	288.6	950	3.3:1	70.2	8.7	1556	30	17.7	17.6	15.2	20.3	24.7
1Q24	100.00%	960	n/a	n/a	324.5	950	2.9:1	70.0	8.7	1679	30	18.2	18.2	15.8	20.9	25.5
Jan'24	100.00%	928	n/a	n/a	324.5	950	2.9:1	70.0	8.6	1679	30	17.9	17.6	15.2	20.3	25.2
Feb'24	100.00%	960	n/a	n/a	286.3	950	3.3:1	67.7	8.7	1566	30	18.4	18.2	15.8	20.9	25.6
Mar'24	100.00%	858	n/a	n/a	296.5	950	3.2:1	66.4	8.7	1542	30	18.4	18.2	15.8	20.9	25.5

(1) Service level guidelines: (A) 99.98% system availability; (B) 10 minute recovery time for full system failures; (C) Operations production support 24x5 in primary and backup data center and test support provided on Tuesdays, Thursdays, and Saturdays.

(2) Beginning 1Q14, capacity planning interval changed from 1-second to 100-microseconds.

(3) Message latency is measured beginning with the time-stamp taken as an inbound Participant message arrives at the network entrance to the CTS/CQS 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. Latency is represented in milliseconds.

CTS: Trade Feed (Tape A&B)																
Quarter	System Availability (1)	Peak Messages Per Second (thousands)	Capacity Messages Per Second (thousands)	Capacity vs Peak Ratio	Peak Messages Per 100 Milliseconds (thousands) (2)	Capacity Messages Per 100 Milliseconds (thousands)	Capacity vs Peak Ratio	Peak Messages Per 10 Milliseconds (thousands)	Peak Messages Per 1 Millisecond (thousands)	Peak Transactions Per Day (millions)	Capacity Transactions Per Day (millions)	Average Latency (3)	Median Latency (3)	10th Percentile Latency	90th Percentile Latency	99th Percentile Latency
1Q22	100.00%	128.3	n/a	n/a	63.6	350	5.5:1	19.9	2.8	101.0	720	20.6	18.7	15.9	22.4	32.4
Jan'22	100.00%	90.2	n/a	n/a	44.2	350	7.9:1	15.4	2.8	101.0	720	20.5	18.6	15.9	22.4	32.4
Feb'22	100.00%	124.7	n/a	n/a	63.0	350	5.6:1	19.9	2.8	95.5	720	21.0	18.7	15.9	22.4	32.4
Mar'22	100.00%	128.3	n/a	n/a	63.6	350	5.5:1	18.5	2.8	95.7	720	20.5	18.5	15.8	22.2	32.0
2Q22	100.00%	177.0	n/a	n/a	66.8	350	5.2:1	19.7	3.8	85.8	720	20.7	19.5	16.6	23.3	29.6
Apr'22	100.00%	114.0	n/a	n/a	46.4	350	7.5:1	18.5	3.7	76.9	720	21.0	19.5	16.6	23.3	29.7
May'22	100.00%	177.0	n/a	n/a	60.8	350	5.8:1	17.2	3.7	85.8	720	20.7	19.5	16.6	23.3	29.9
Jun'22	100.00%	134.6	n/a	n/a	66.8	350	5.2:1	19.7	3.8	81.3	720	20.3	19.5	16.6	23.3	29.6
3Q22	100.00%	123.6	n/a	n/a	68.3	350	5.1:1	21.6	3.9	73.7	720	20.4	19.7	16.6	23.5	29.9
Jul'22	100.00%	123.6	n/a	n/a	68.3	350	5.1:1	21.6	3.9	68.4	720	20.2	19.7	16.7	23.5	29.9
Aug'22	100.00%	101.1	n/a	n/a	51.5	350	6.8:1	16.7	3.7	62.0	720	20.0	19.5	16.6	23.3	29.0
Sep'22	100.00%	121.1	n/a	n/a	63.1	350	5.5:1	20.3	3.8	73.7	720	20.8	19.7	16.6	23.5	31.1
4Q22	100.00%	146.3	n/a	n/a	70.1	350	5.0:1	23.0	4.0	76.7	720	20.3	19.7	16.6	23.5	30.8
Oct'22	100.00%	112.4	n/a	n/a	53.5	350	6.5:1	18.1	3.8	73.0	720	20.4	19.7	16.6	23.5	31.1
Nov'22	100.00%	146.3	n/a	n/a	61.9	350	5.7:1	23.0	4.0	76.7	720	20.3	19.5	16.6	23.5	30.5
Dec'22	100.00%	141.4	n/a	n/a	70.1	350	5.0:1	18.6	3.4	71.6	720	20.1	19.7	16.6	23.5	30.8
1Q23	100.00%	151.1	n/a	n/a	62.4	350	5.6:1	21.5	3.9	97.5	720	20.0	19.5	16.4	23.3	31.1
Jan'23	100.00%	131.9	n/a	n/a	45.9	350	7.6:1	21.5	3.9	67.5	720	20.1	19.5	16.6	23.5	30.5
Feb'23	100.00%	151.1	n/a	n/a	51.9	350	6.7:1	18.3	3.6	79.7	720	20.2	19.5	16.6	23.3	31.1
Mar'23	100.00%	136.5	n/a	n/a	62.4	350	5.6:1	20.9	3.8	97.5	720	19.8	18.5	16.1	22.4	32.4
2Q23	99.991%	120.2	n/a	n/a	64.8	350	5.4:1	26.3	4.3	76.0	720	20.1	18.3	15.9	22.2	31.7
Apr'23	100.00%	87.4	n/a	n/a	56.3	350	6.2:1	24.3	4.0	68.1	720	20.1	18.5	15.9	22.4	31.4
May'23	100.00%	120.2	n/a	n/a	64.8	350	5.4:1	23.5	4.3	76.0	720	20.8	18.5	15.9	22.4	33.5
Jun'23	99.97%	116.0	n/a	n/a	62.5	350	5.6:1	26.3	4.2	73.2	720	19.3	18.2	15.8	21.7	30.2
3Q23	100.00%	106.9	n/a	n/a	65.8	350	5.3:1	25.8	4.4	73.6	720	19.6	18.2	15.8	21.5	29.9
Jul'23	100.00%	106.9	n/a	n/a	52.2	350	6.7:1	25.8	4.4	73.6	720	19.1	18.0	15.8	21.5	29.4
Aug'23	100.00%	84.8	n/a	n/a	50.6	350	6.9:1	23.8	4.2	72.6	720	20.2	18.2	15.9	21.7	29.9
Sep'23	100.00%	91.6	n/a	n/a	65.8	350	5.3:1	25.5	4.3	70.4	720	19.3	18.2	15.9	21.7	29.7
4Q23	100.00%	114.2	n/a	n/a	61.1	350	5.7:1	27.9	4.4	87.1	720	19.9	18.2	15.9	21.7	30.5
Oct'23	100.00%	107.3	n/a	n/a	53.8	350	6.5:1	23.2	4.2	74.2	720	19.7	18.2	15.9	21.9	31.3
Nov'23	100.00%	114.2	n/a	n/a	61.1	350	5.7:1	27.9	4.4	75.6	720	19.9	18.2	15.9	21.7	29.9
Dec'23	100.00%	100.8	n/a	n/a	54.7	350	6.4:1	22.0	4.0	87.1	720	19.7	18.2	15.9	21.7	30.0
1Q24	100.00%	125.2	n/a	n/a	56.1	350	6.2:1	27.1	4.4	77.0	720	20.5	18.7	16.4	22.2	31.4
Jan'24	100.00%	88.6	n/a	n/a	48.9	350	7.2:1	27.1	4.2	75.3	720	20.5	18.3	15.9	21.9	31.4
Feb'24	100.00%	125.2	n/a	n/a	54.2	350	6.5:1	25.7	4.4	77.0	720	20.7	18.7	16.6	22.4	31.3
Mar'24	100.00%	103.1	n/a	n/a	56.1	350	6.2:1	25.1	4.1	74.5	720	20.2	18.7	16.4	22.4	31.4

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