

## Overall Times

	label	TPCH wall time	TPC-DS wall time	TPCH CPU time	TPC-DS CPU time	TPCH Network GB	TPC-DS Network GB	TPCH peak mem	TPC-DS peak mem	TPCH wall time % change	TPC-DS wall time % change	TPCH CPU time % change	TPC-DS CPU time % change	TPCH Network GB % change	TPC-DS Network GB % change	TPCH peak mem % change	TPC-DS peak mem % change
0	baseline	755	1,032	96,730	120,125	2,652	1,976	2,122,704,058	1,125,713,208	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	poo rle arrays support	741	1,022	94,512	118,900	2,648	1,977	2,123,193,273	1,115,332,251	-1.86	-1.02	-2.29	-1.02	-0.12	0.10	0.02	-0.92

## FAILED QUERIES

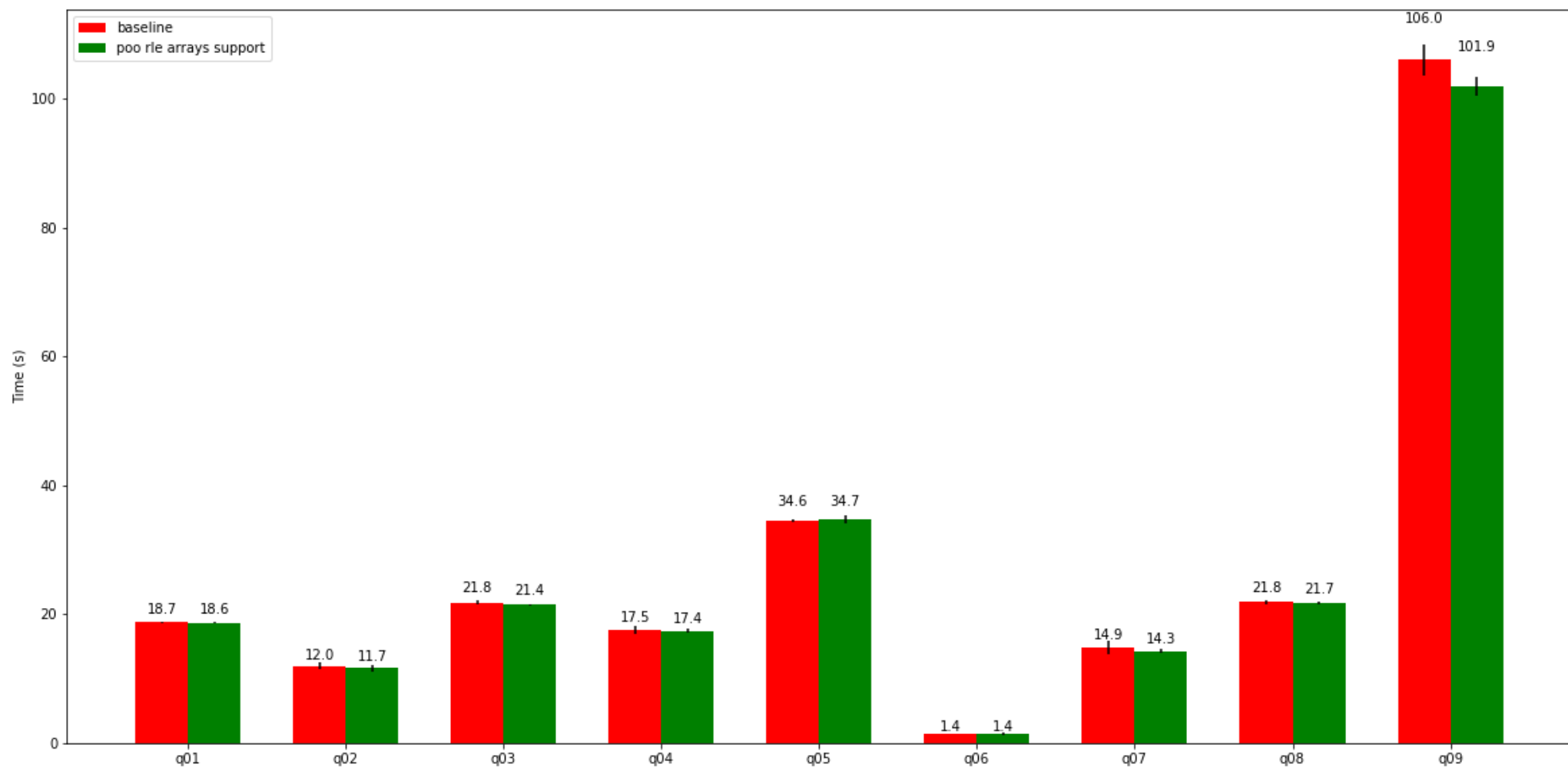
### baseline

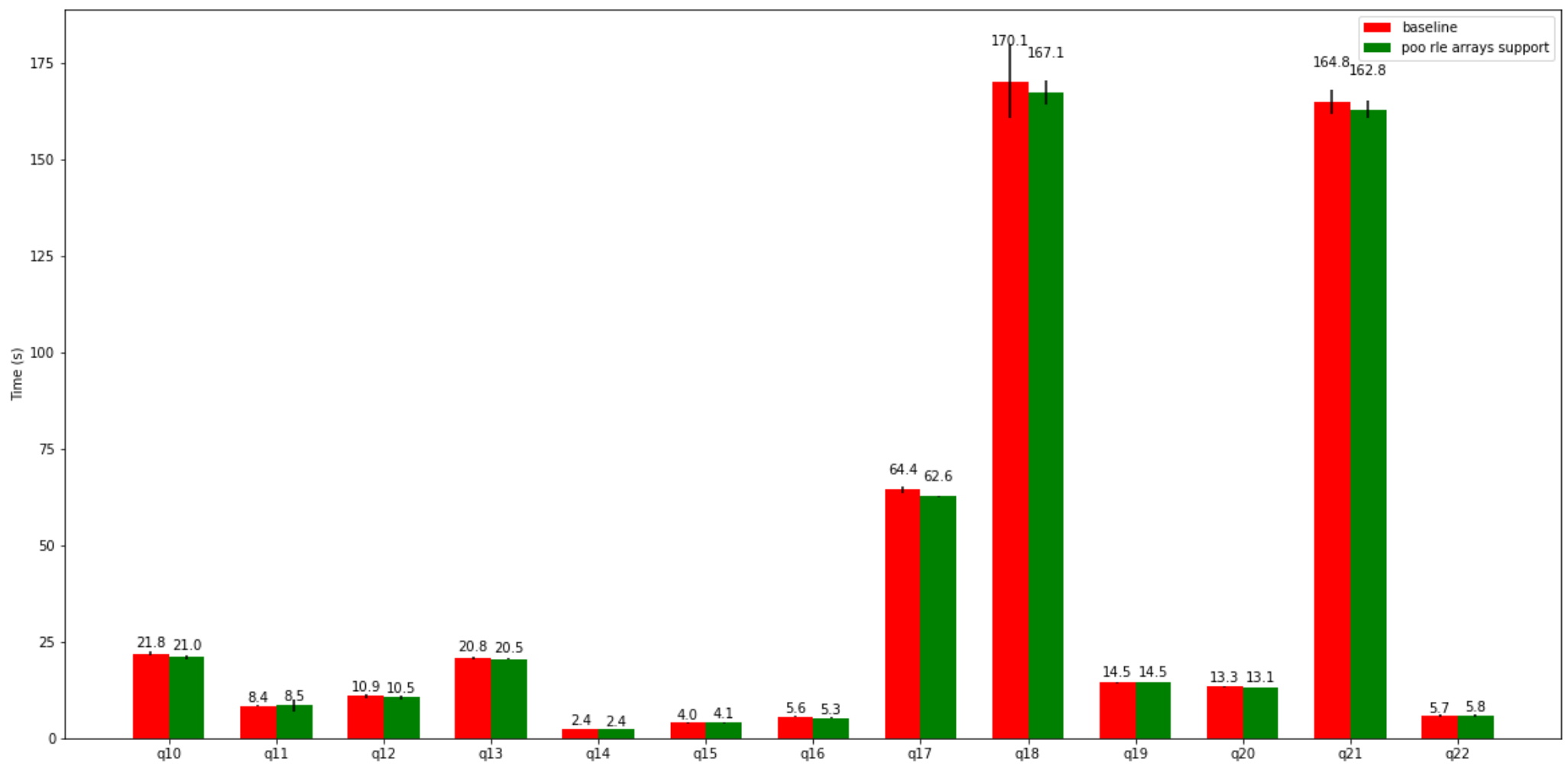
benchmark	query	mean_duration	std_dev
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### poo rle arrays support

benchmark	query	mean_duration	std_dev
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## TPC-H Comparison (DURATION)





	query	baseline mean	baseline std.dev	poo rle arrays support mean	poo rle arrays support std.dev	% change	baseline std.dev %	poo rle arrays support std.dev %	p-value
15	presto/tpch: q16	5.58	0.16	5.30	0.07	-5.05	2.78	1.36	0.00238
6	presto/tpch: q07	14.87	1.00	14.27	0.36	-4.07	6.74	2.51	0.19335
9	presto/tpch: q10	21.84	0.57	20.95	0.50	-4.07	2.59	2.40	0.01651
8	presto/tpch: q09	105.98	2.39	101.91	1.50	-3.84	2.25	1.47	0.00539
11	presto/tpch: q12	10.88	0.45	10.52	0.47	-3.23	4.17	4.42	0.21473
16	presto/tpch: q17	64.37	0.88	62.61	0.27	-2.73	1.37	0.43	0.00089

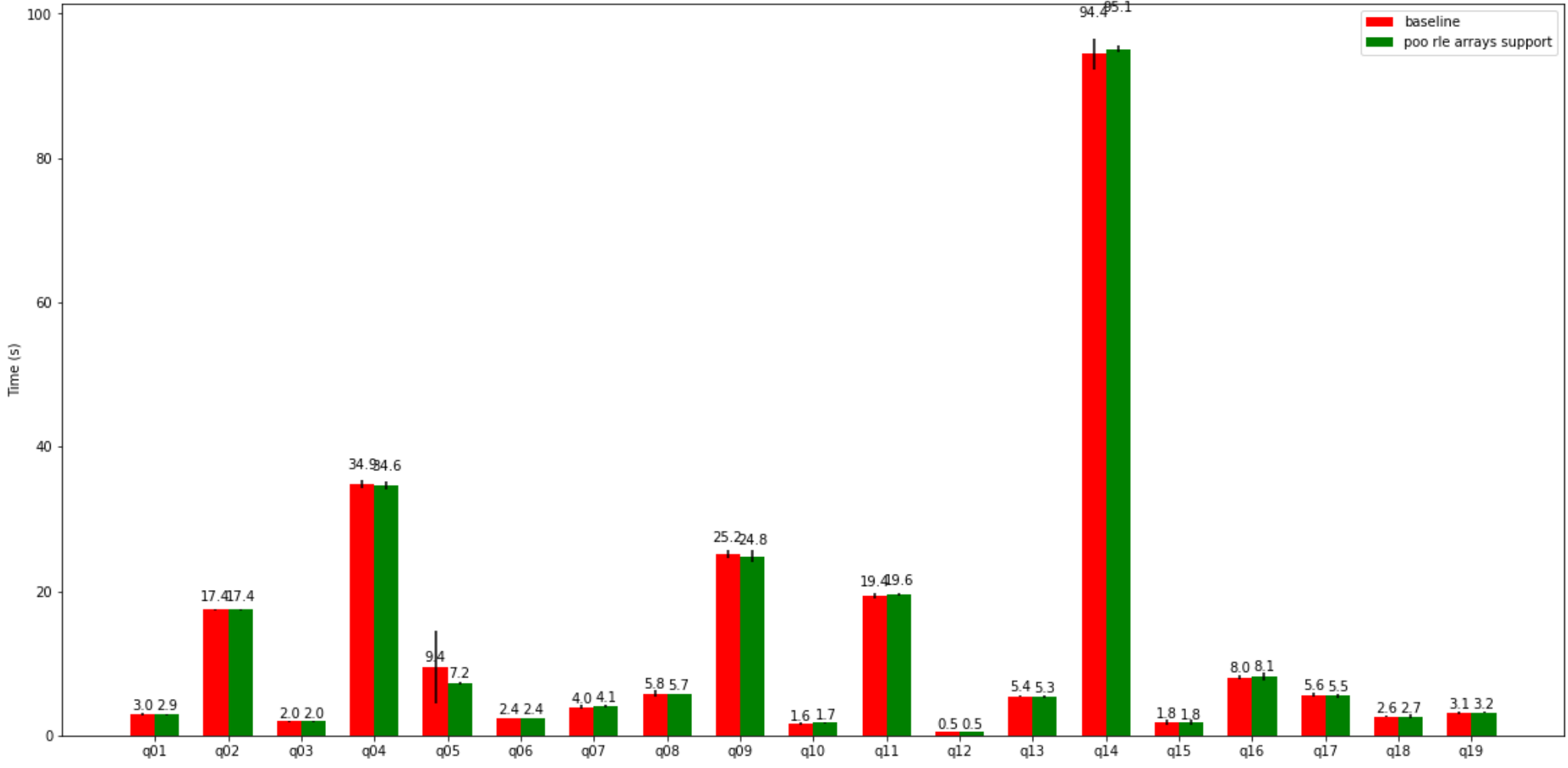
	query	baseline mean	baseline std.dev	poor arrays support mean	poor arrays support std.dev	% change	baseline std.dev %	poor arrays support std.dev %	p-value
1	presto/tpch:q02	11.97	0.47	11.66	0.54	-2.66	3.90	4.67	0.30211
13	presto/tpch:q14	2.44	0.04	2.39	0.09	-1.97	1.63	3.61	0.24292
2	presto/tpch:q03	21.82	0.34	21.42	0.17	-1.82	1.54	0.80	0.02775
17	presto/tpch:q18	170.13	9.53	167.10	3.06	-1.78	5.60	1.83	0.47499
19	presto/tpch:q20	13.29	0.11	13.09	0.14	-1.52	0.79	1.03	0.01592
12	presto/tpch:q13	20.83	0.29	20.53	0.30	-1.43	1.40	1.45	0.11007
20	presto/tpch:q21	164.75	3.00	162.82	2.17	-1.18	1.82	1.33	0.22966
0	presto/tpch:q01	18.73	0.06	18.62	0.12	-0.57	0.32	0.63	0.07741
7	presto/tpch:q08	21.85	0.38	21.74	0.23	-0.48	1.75	1.06	0.57486
3	presto/tpch:q04	17.47	0.62	17.40	0.35	-0.39	3.56	2.03	0.82103
18	presto/tpch:q19	14.50	0.18	14.48	0.12	-0.13	1.23	0.82	0.83142
4	presto/tpch:q05	34.56	0.24	34.69	0.58	0.38	0.69	1.68	0.61961
10	presto/tpch:q11	8.36	0.09	8.45	1.45	1.07	1.02	17.17	0.88357
21	presto/tpch:q22	5.72	0.36	5.79	0.36	1.29	6.38	6.15	0.73077
14	presto/tpch:q15	4.00	0.17	4.08	0.17	1.96	4.17	4.19	0.44085
5	presto/tpch:q06	1.38	0.06	1.45	0.14	4.75	4.04	9.48	0.30333

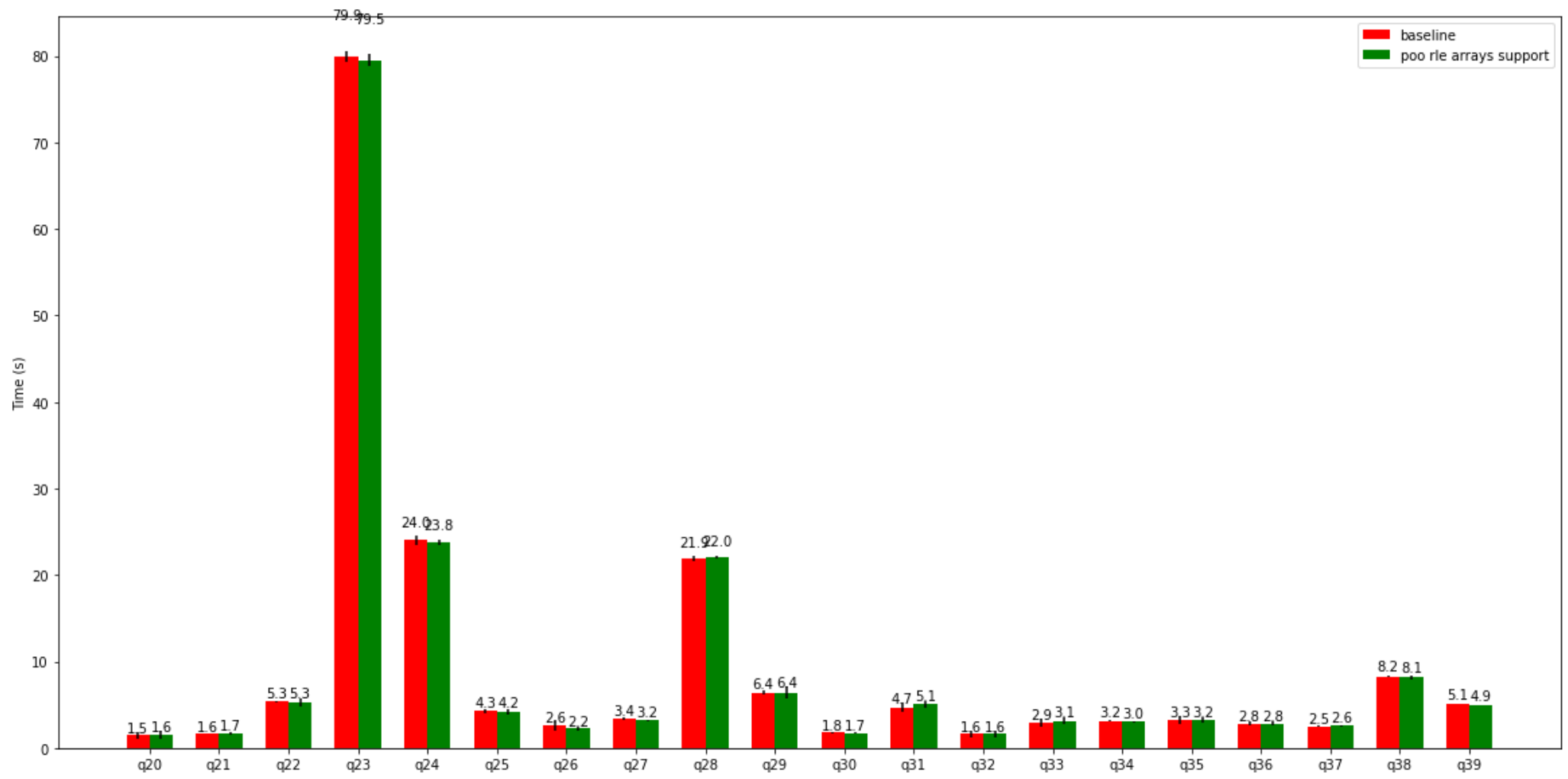
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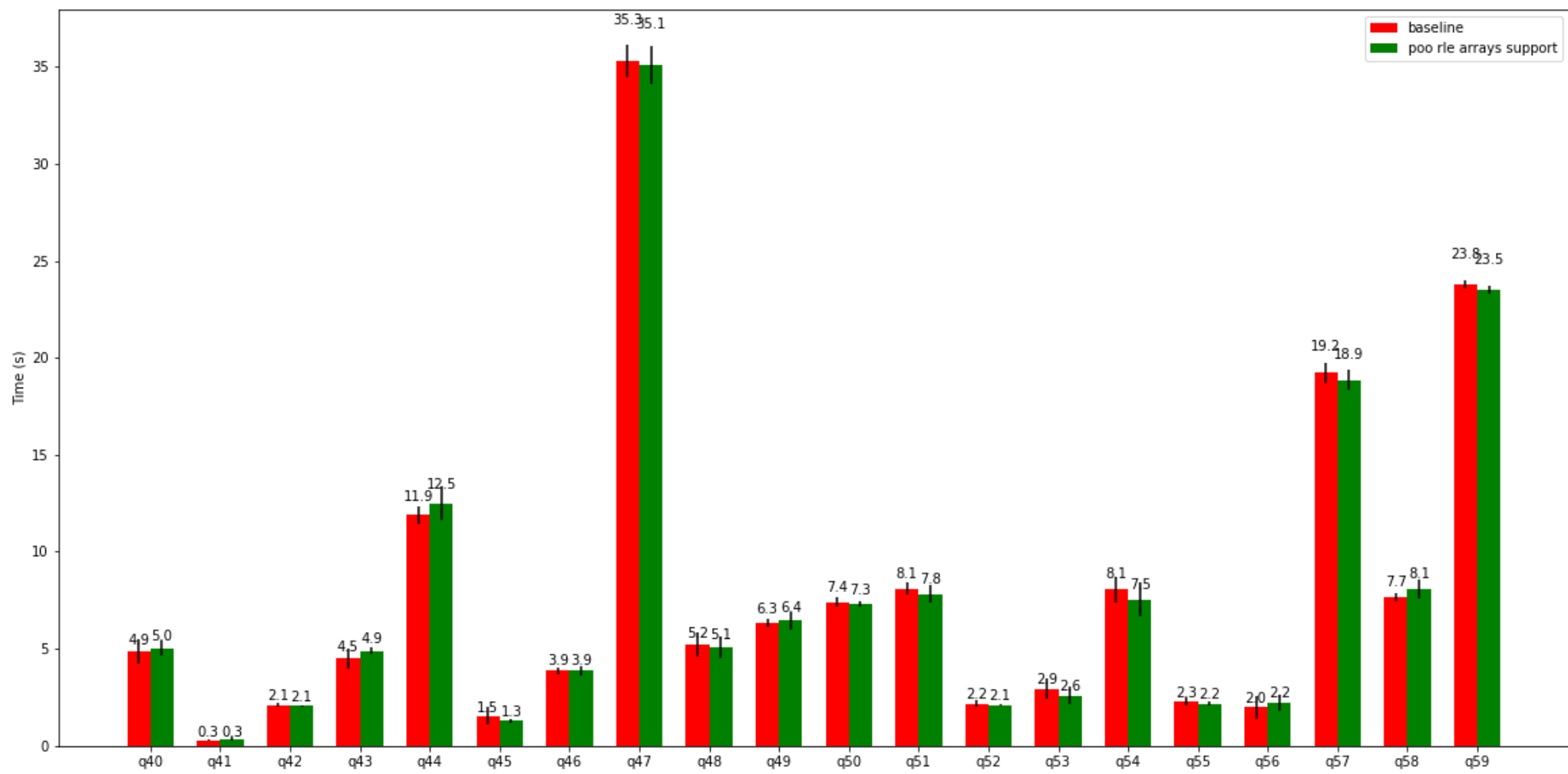
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25%      -3
50%      -1
75%      -0
max       5
Name: % change, dtype: float64

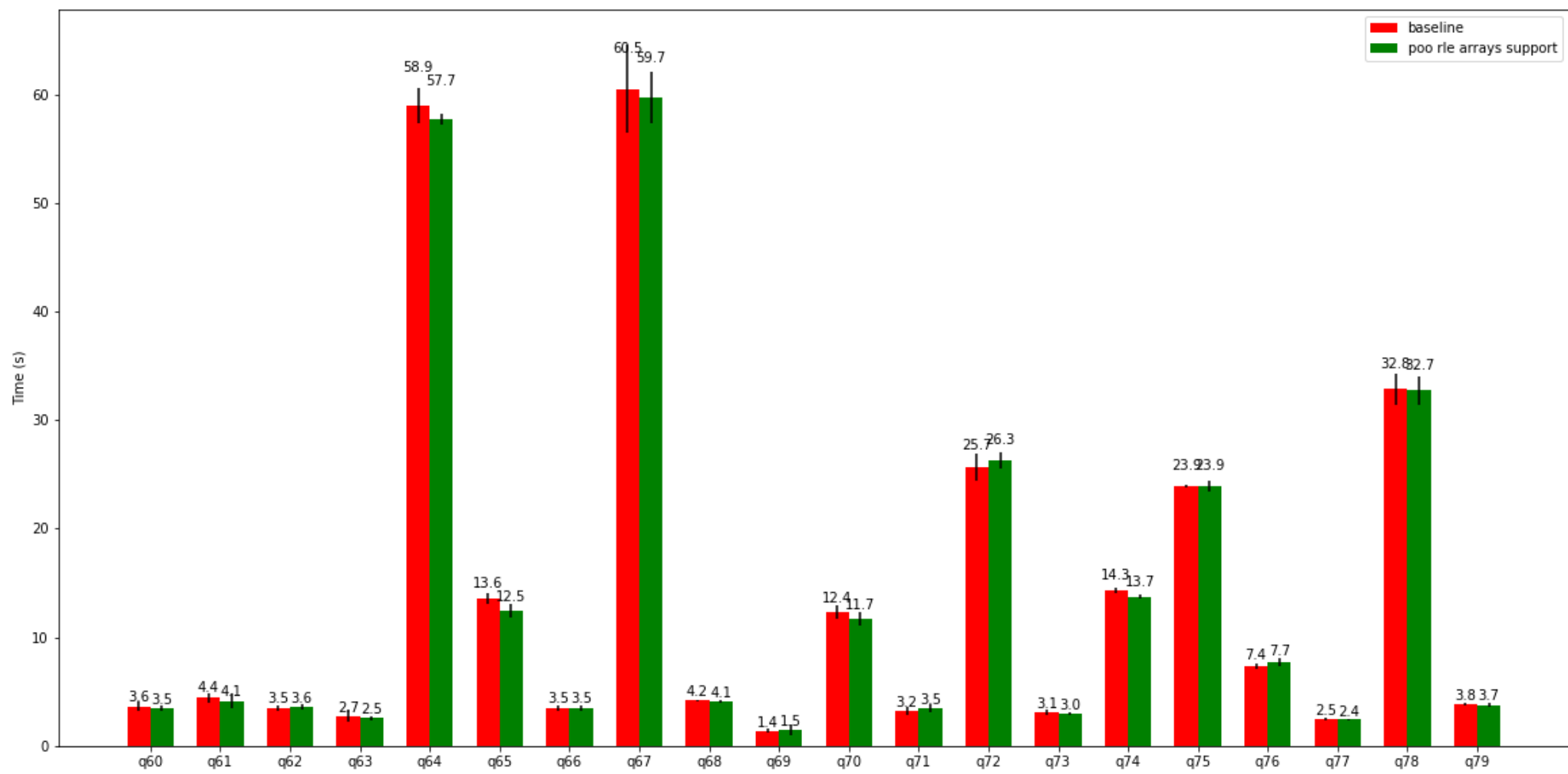
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# TPC-DS Comparison (DURATION)

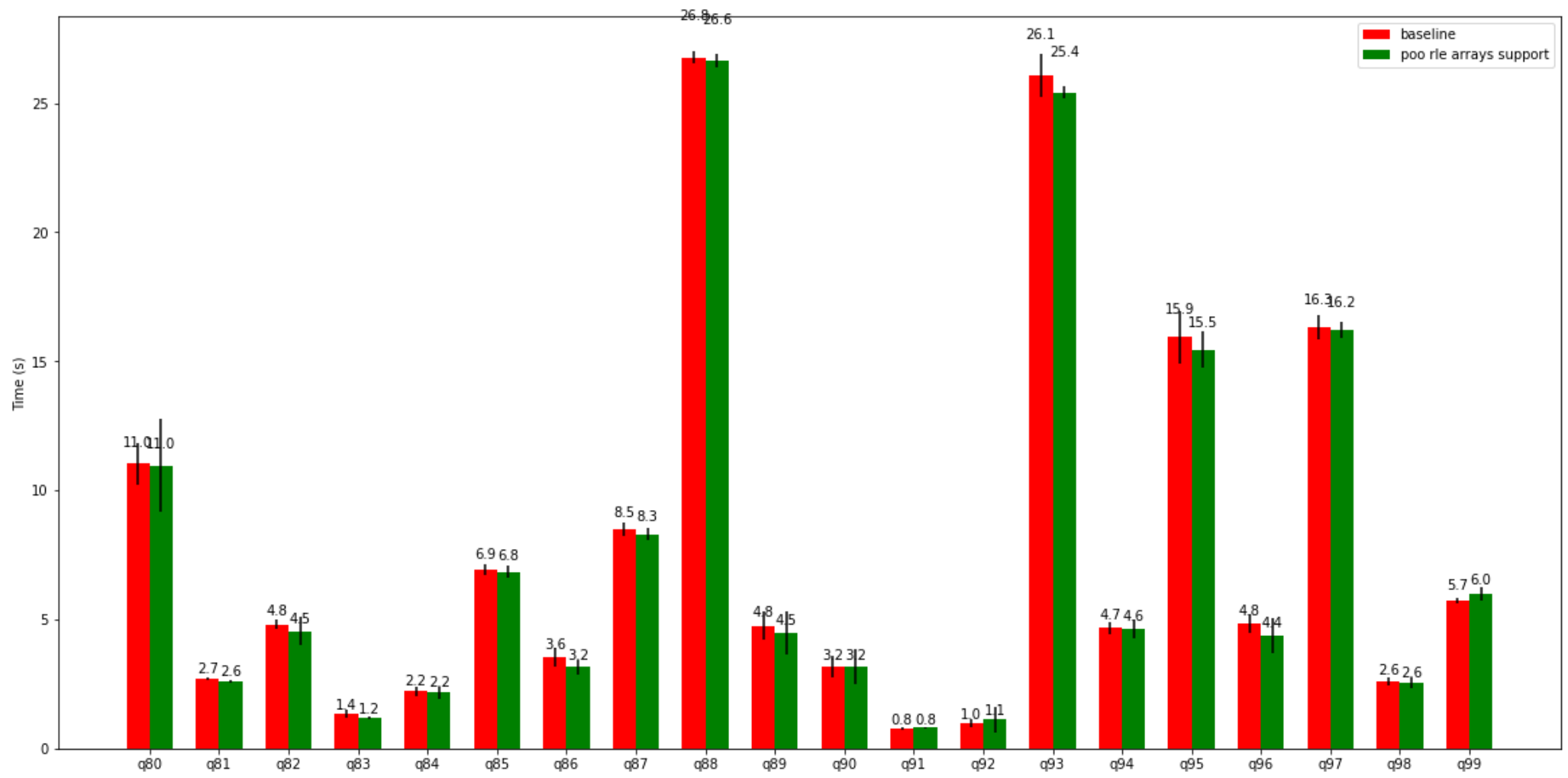


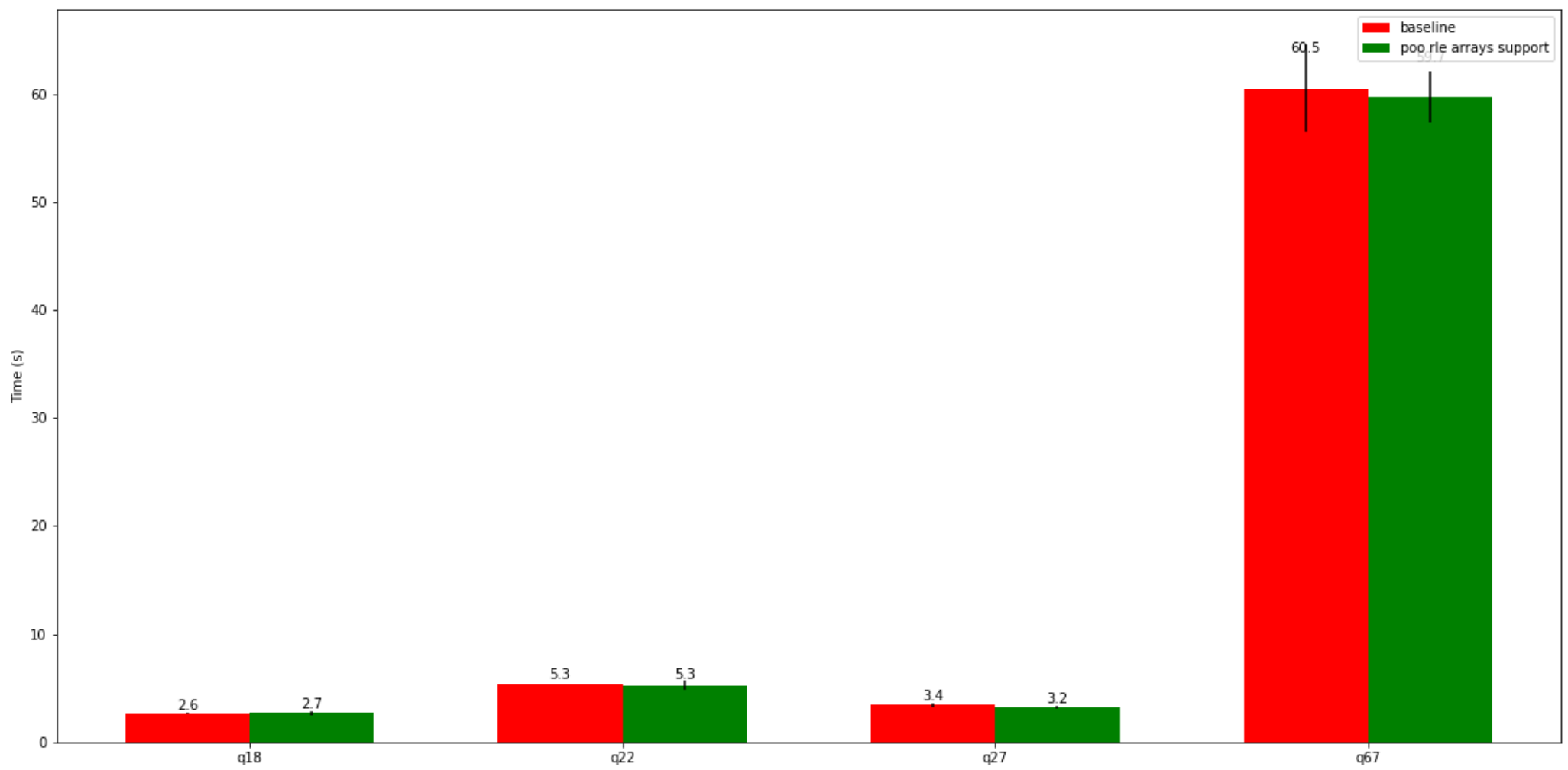












	query	baseline mean	baseline std.dev	poo rle arrays support mean	poo rle arrays support std.dev	% change	baseline std.dev %	poo rle arrays support std.dev %	p-value
4	presto/tpcds: q05	9.44	5.09	7.24	0.27	-23.34	53.89	3.68	0.31430
44	presto/tpcds: q45	1.54	0.45	1.29	0.08	-16.11	29.12	6.58	0.21268
25	presto/tpcds: q26	2.61	0.63	2.25	0.20	-13.98	24.32	9.06	0.20964
82	presto/tpcds: q83	1.36	0.14	1.19	0.04	-12.00	10.50	2.95	0.02169
52	presto/tpcds: q53	2.93	0.51	2.60	0.46	-11.39	17.49	17.85	0.26410
85	presto/tpcds: q86	3.56	0.36	3.17	0.29	-11.09	10.24	9.15	0.06463

	query	baseline mean	baseline std.dev	poor arrays support mean	poor arrays support std.dev	% change	baseline std.dev %	poor arrays support std.dev %	p-value
95	presto/tpcds:q96	4.84	0.38	4.38	0.69	-9.56	7.79	15.72	0.17904
64	presto/tpcds:q65	13.59	0.47	12.46	0.62	-8.32	3.43	4.96	0.00503
62	presto/tpcds:q63	2.74	0.57	2.54	0.14	-7.64	20.68	5.41	0.39974
26	presto/tpcds:q27	3.43	0.17	3.20	0.09	-6.71	4.89	2.84	0.01444
60	presto/tpcds:q61	4.43	0.42	4.14	0.65	-6.68	9.48	15.63	0.36934
53	presto/tpcds:q54	8.07	0.67	7.53	0.86	-6.61	8.31	11.47	0.25994
88	presto/tpcds:q89	4.75	0.53	4.47	0.83	-5.84	11.26	18.54	0.50682
81	presto/tpcds:q82	4.81	0.20	4.55	0.54	-5.41	4.09	11.95	0.29615
69	presto/tpcds:q70	12.36	0.63	11.70	0.67	-5.32	5.13	5.72	0.11161
59	presto/tpcds:q60	3.65	0.43	3.46	0.19	-5.06	11.80	5.58	0.36106
33	presto/tpcds:q34	3.15	0.10	3.01	0.13	-4.39	3.23	4.16	0.06222
54	presto/tpcds:q55	2.27	0.21	2.17	0.10	-4.24	9.46	4.74	0.34586
73	presto/tpcds:q74	14.31	0.29	13.74	0.17	-4.00	2.01	1.25	0.00187
72	presto/tpcds:q73	3.09	0.23	2.97	0.09	-3.94	7.40	2.94	0.25113
11	presto/tpcds:q12	0.52	0.01	0.50	0.02	-3.89	2.81	3.74	0.06290
80	presto/tpcds:q81	2.71	0.07	2.61	0.05	-3.77	2.48	2.00	0.01479
50	presto/tpcds:q51	8.10	0.33	7.82	0.47	-3.51	4.02	6.01	0.25030
29	presto/tpcds:q30	1.80	0.07	1.74	0.09	-3.43	3.92	5.12	0.21201
51	presto/tpcds:q52	2.18	0.15	2.11	0.06	-3.22	6.90	2.84	0.31350

	query	baseline mean	baseline std.dev	poor arrays support mean	poor arrays support std.dev	% change	baseline std.dev %	poor arrays support std.dev %	p-value
38	presto/tpcds:q39	5.08	0.04	4.92	0.02	-3.05	0.71	0.41	0.00000
94	presto/tpcds:q95	15.93	1.04	15.46	0.70	-2.97	6.50	4.55	0.37653
76	presto/tpcds:q77	2.48	0.14	2.41	0.07	-2.82	5.54	3.03	0.29613
0	presto/tpcds:q01	3.00	0.16	2.92	0.11	-2.66	5.31	3.93	0.34311
83	presto/tpcds:q84	2.23	0.18	2.17	0.23	-2.63	8.08	10.44	0.63021
92	presto/tpcds:q93	26.08	0.84	25.42	0.25	-2.55	3.21	1.00	0.09275
97	presto/tpcds:q98	2.61	0.15	2.56	0.21	-2.16	5.82	8.32	0.60912
67	presto/tpcds:q68	4.15	0.08	4.06	0.11	-2.14	1.93	2.81	0.15057
78	presto/tpcds:q79	3.82	0.15	3.74	0.19	-2.03	4.02	4.96	0.44796
86	presto/tpcds:q87	8.47	0.26	8.30	0.24	-1.99	3.06	2.84	0.26534
63	presto/tpcds:q64	58.90	1.63	57.74	0.50	-1.98	2.76	0.87	0.12446
56	presto/tpcds:q57	19.23	0.53	18.85	0.54	-1.97	2.77	2.86	0.24853
31	presto/tpcds:q32	1.64	0.40	1.61	0.36	-1.94	24.62	22.35	0.88820
47	presto/tpcds:q48	5.20	0.62	5.10	0.55	-1.91	11.97	10.83	0.77573
34	presto/tpcds:q35	3.26	0.44	3.20	0.30	-1.86	13.38	9.43	0.78507
12	presto/tpcds:q13	5.45	0.12	5.34	0.15	-1.86	2.25	2.87	0.23588
16	presto/tpcds:q17	5.62	0.32	5.52	0.28	-1.74	5.69	5.08	0.58650
41	presto/tpcds:q42	2.10	0.09	2.06	0.04	-1.60	4.19	1.88	0.41280
14	presto/tpcds:q15	1.84	0.34	1.81	0.38	-1.56	18.34	20.84	0.89267

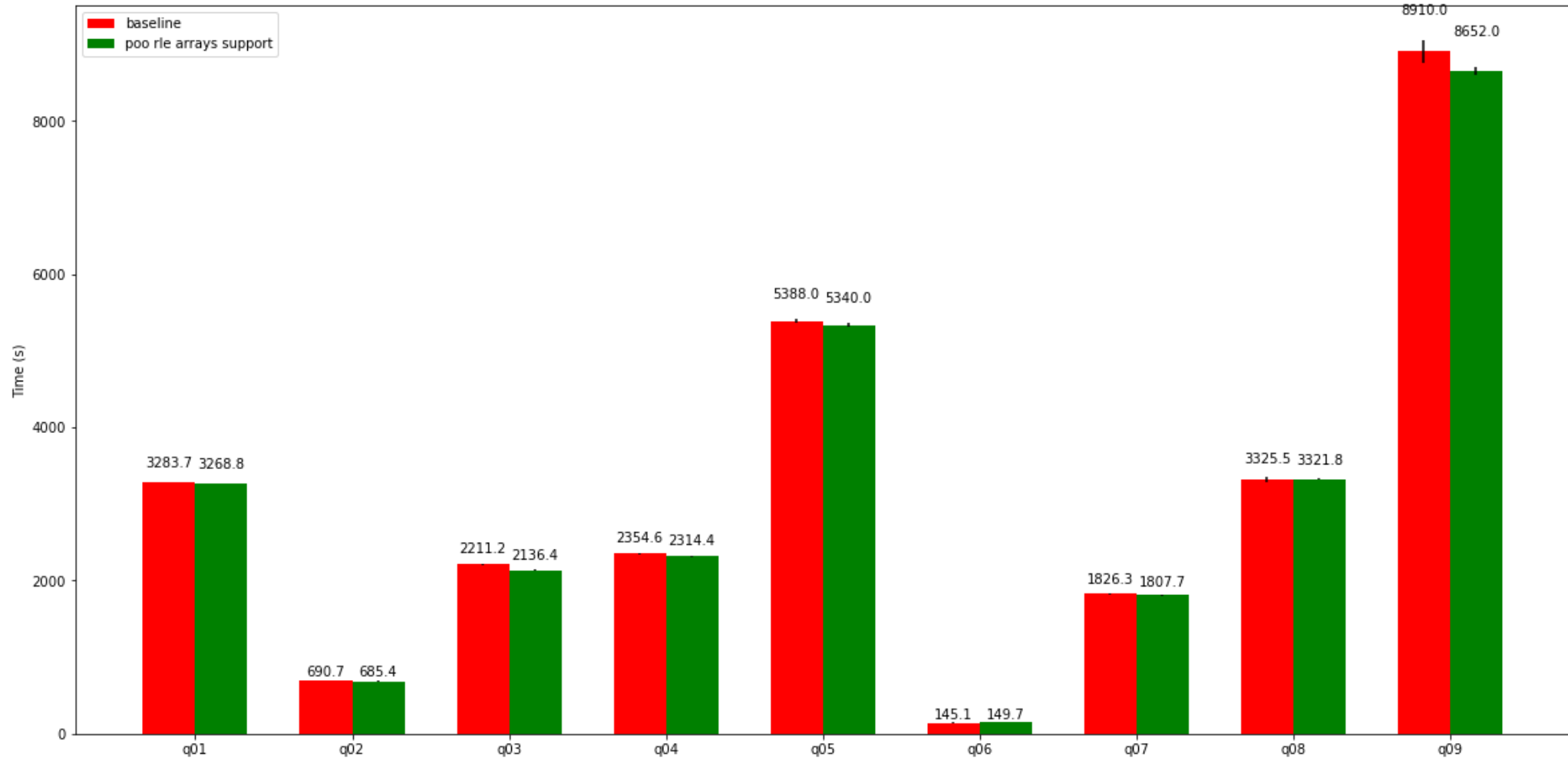
	query	baseline mean	baseline std.dev	poor arrays support mean	poor arrays support std.dev	% change	baseline std.dev %	poor arrays support std.dev %	p-value
8	presto/tpcds:q09	25.15	0.59	24.78	0.82	-1.46	2.36	3.31	0.39380
84	presto/tpcds:q85	6.93	0.23	6.84	0.24	-1.35	3.30	3.44	0.49935
66	presto/tpcds:q67	60.49	4.06	59.68	2.33	-1.34	6.70	3.90	0.67956
21	presto/tpcds:q22	5.34	0.04	5.27	0.48	-1.27	0.78	9.08	0.73599
58	presto/tpcds:q59	23.77	0.20	23.48	0.22	-1.22	0.82	0.92	0.03528
24	presto/tpcds:q25	4.27	0.24	4.22	0.28	-1.13	5.69	6.75	0.75886
49	presto/tpcds:q50	7.41	0.24	7.33	0.15	-1.06	3.23	2.11	0.51255
37	presto/tpcds:q38	8.23	0.08	8.14	0.27	-1.05	1.03	3.28	0.46733
23	presto/tpcds:q24	24.04	0.55	23.79	0.31	-1.01	2.27	1.30	0.36689
7	presto/tpcds:q08	5.79	0.46	5.73	0.03	-0.97	7.87	0.56	0.76884
93	presto/tpcds:q94	4.66	0.22	4.63	0.38	-0.75	4.69	8.13	0.84838
3	presto/tpcds:q04	34.86	0.58	34.62	0.52	-0.71	1.66	1.50	0.45740
79	presto/tpcds:q80	11.03	0.83	10.96	1.79	-0.63	7.50	16.36	0.93315
96	presto/tpcds:q97	16.32	0.45	16.22	0.32	-0.59	2.79	1.98	0.68082
22	presto/tpcds:q23	79.94	0.61	79.49	0.69	-0.56	0.76	0.87	0.26151
46	presto/tpcds:q47	35.28	0.84	35.08	0.98	-0.55	2.39	2.79	0.71947
87	presto/tpcds:q88	26.77	0.23	26.64	0.26	-0.48	0.88	0.97	0.38998
77	presto/tpcds:q78	32.84	1.43	32.72	1.32	-0.35	4.34	4.05	0.88650
1	presto/tpcds:q02	17.44	0.06	17.41	0.05	-0.17	0.32	0.28	0.35925

	query	baseline mean	baseline std.dev	poor arrays support mean	poor arrays support std.dev	% change	baseline std.dev %	poor arrays support std.dev %	p-value
74	presto/tpcds:q75	23.93	0.15	23.92	0.47	-0.03	0.63	1.97	0.97435
65	presto/tpcds:q66	3.48	0.22	3.48	0.29	0.01	6.20	8.37	0.99825
45	presto/tpcds:q46	3.87	0.17	3.87	0.23	0.12	4.29	5.91	0.96852
89	presto/tpcds:q90	3.17	0.42	3.18	0.66	0.22	13.28	20.79	0.98337
35	presto/tpcds:q36	2.83	0.23	2.84	0.17	0.27	8.27	5.99	0.94954
5	presto/tpcds:q06	2.38	0.07	2.39	0.08	0.38	2.85	3.54	0.84287
2	presto/tpcds:q03	1.97	0.06	1.98	0.07	0.56	2.99	3.29	0.76475
28	presto/tpcds:q29	6.39	0.23	6.42	0.71	0.61	3.53	11.09	0.90078
27	presto/tpcds:q28	21.89	0.25	22.05	0.12	0.70	1.16	0.55	0.21328
13	presto/tpcds:q14	94.41	2.12	95.13	0.48	0.75	2.24	0.51	0.44060
10	presto/tpcds:q11	19.36	0.36	19.56	0.25	1.02	1.84	1.28	0.29349
17	presto/tpcds:q18	2.63	0.07	2.66	0.20	1.16	2.56	7.52	0.72967
48	presto/tpcds:q49	6.34	0.21	6.44	0.46	1.61	3.30	7.13	0.63070
15	presto/tpcds:q16	7.99	0.27	8.13	0.51	1.72	3.39	6.22	0.56926
71	presto/tpcds:q72	25.69	1.25	26.25	0.72	2.17	4.85	2.75	0.36614
61	presto/tpcds:q62	3.49	0.22	3.58	0.27	2.56	6.18	7.46	0.53861
36	presto/tpcds:q37	2.53	0.10	2.60	0.07	2.64	4.06	2.60	0.21302
6	presto/tpcds:q07	3.95	0.30	4.07	0.21	3.09	7.70	5.26	0.44061
20	presto/tpcds:q21	1.63	0.02	1.68	0.08	3.09	1.15	5.06	0.18643

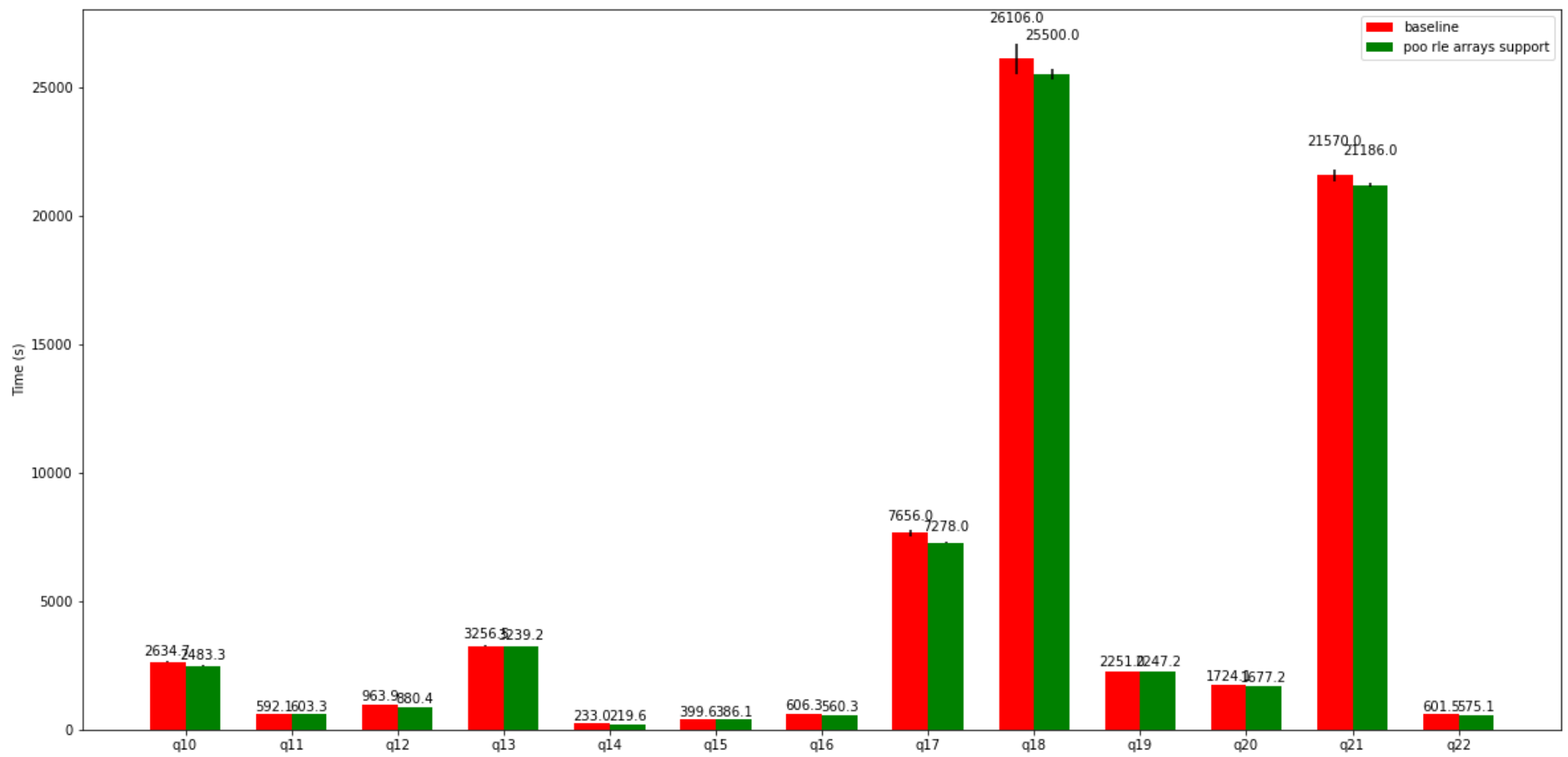


max 16  
Name: % change, dtype: float64

## TPC-H Comparison (CPU)







	query	baseline mean	baseline std.dev	poo rle arrays support mean	poo rle arrays support std.dev	% change	baseline std.dev %	poo rle arrays support std.dev %	p-value
11	presto/tpch: q12	963.90	2.07	880.40	1.12	-8.66	0.21	0.13	0.00000
15	presto/tpch: q16	606.30	1.46	560.30	1.88	-7.59	0.24	0.33	0.00000
13	presto/tpch: q14	233.00	1.64	219.60	0.93	-5.75	0.70	0.42	0.00000
9	presto/tpch: q10	2634.70	27.27	2483.30	10.40	-5.75	1.04	0.42	0.00000
16	presto/tpch: q17	7656.00	145.20	7278.00	14.70	-4.94	1.90	0.20	0.00008
21	presto/tpch: q22	601.50	3.94	575.10	2.10	-4.39	0.65	0.37	0.00000

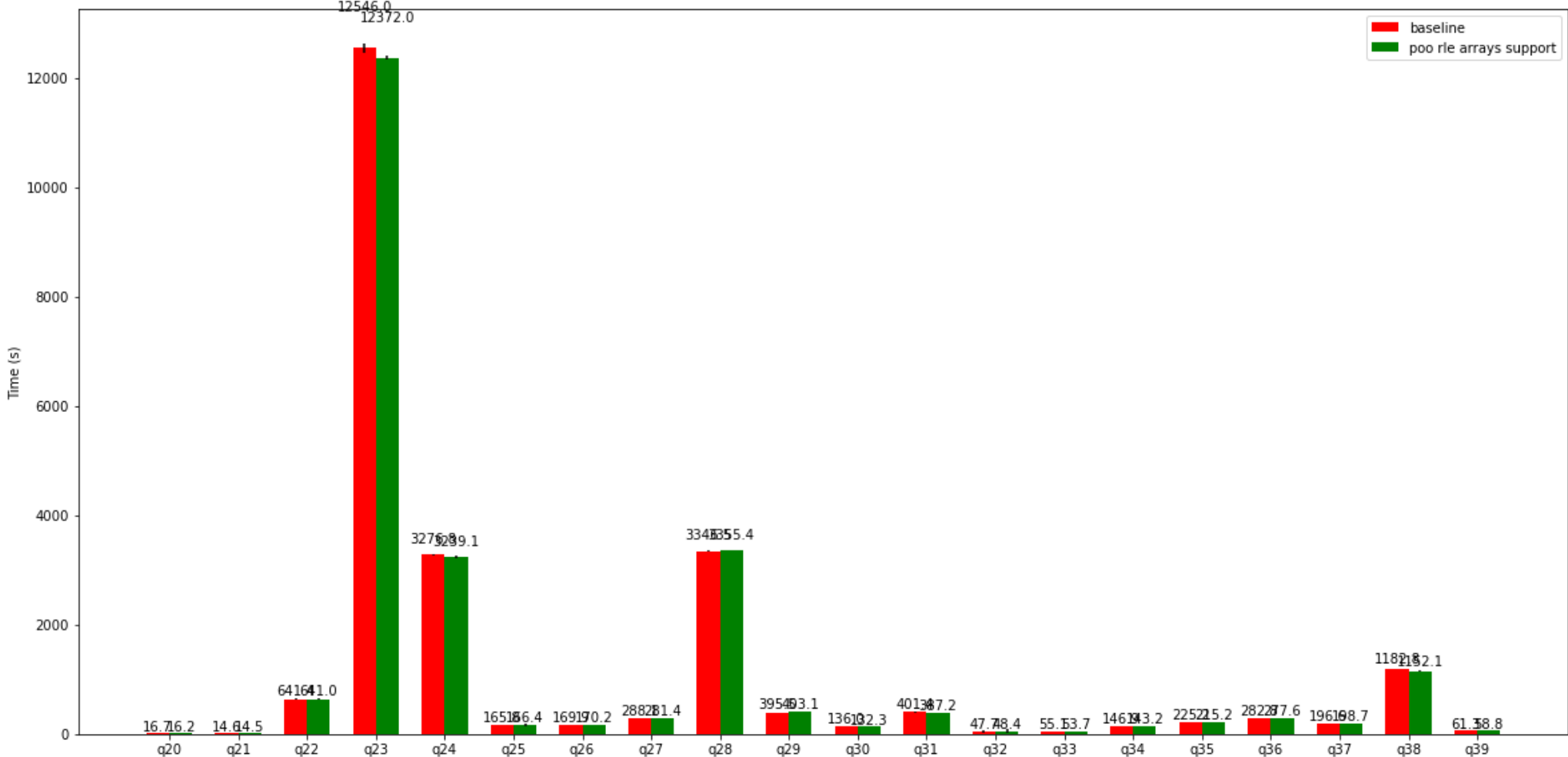
	query	baseline mean	baseline std.dev	poor arrays support mean	poor arrays support std.dev	% change	baseline std.dev %	poor arrays support std.dev %	p-value
2	presto/tpch:q03	2211.20	10.48	2136.40	7.35	-3.38	0.47	0.34	0.00000
14	presto/tpch:q15	399.60	0.54	386.10	1.41	-3.38	0.13	0.36	0.00000
8	presto/tpch:q09	8910.00	145.34	8652.00	49.19	-2.90	1.63	0.57	0.00208
19	presto/tpch:q20	1724.10	1.35	1677.20	4.58	-2.72	0.08	0.27	0.00000
17	presto/tpch:q18	26106.00	588.21	25500.00	210.74	-2.32	2.25	0.83	0.03890
20	presto/tpch:q21	21570.00	215.30	21186.00	74.65	-1.78	1.00	0.35	0.00205
3	presto/tpch:q04	2354.60	7.86	2314.40	6.17	-1.71	0.33	0.27	0.00000
6	presto/tpch:q07	1826.30	4.94	1807.70	9.88	-1.02	0.27	0.55	0.00206
4	presto/tpch:q05	5388.00	29.39	5340.00	29.39	-0.89	0.55	0.55	0.01790
1	presto/tpch:q02	690.70	3.21	685.40	2.10	-0.77	0.46	0.31	0.00693
12	presto/tpch:q13	3256.50	24.96	3239.20	6.65	-0.53	0.77	0.21	0.13193
0	presto/tpch:q01	3283.70	6.16	3268.80	3.85	-0.45	0.19	0.12	0.00052
18	presto/tpch:q19	2251.00	9.13	2247.20	10.40	-0.17	0.41	0.46	0.51650
7	presto/tpch:q08	3325.50	32.00	3321.80	7.09	-0.11	0.96	0.21	0.78779
10	presto/tpch:q11	592.10	2.44	603.30	2.54	1.89	0.41	0.42	0.00001
5	presto/tpch:q06	145.10	0.45	149.70	0.33	3.17	0.31	0.22	0.00000

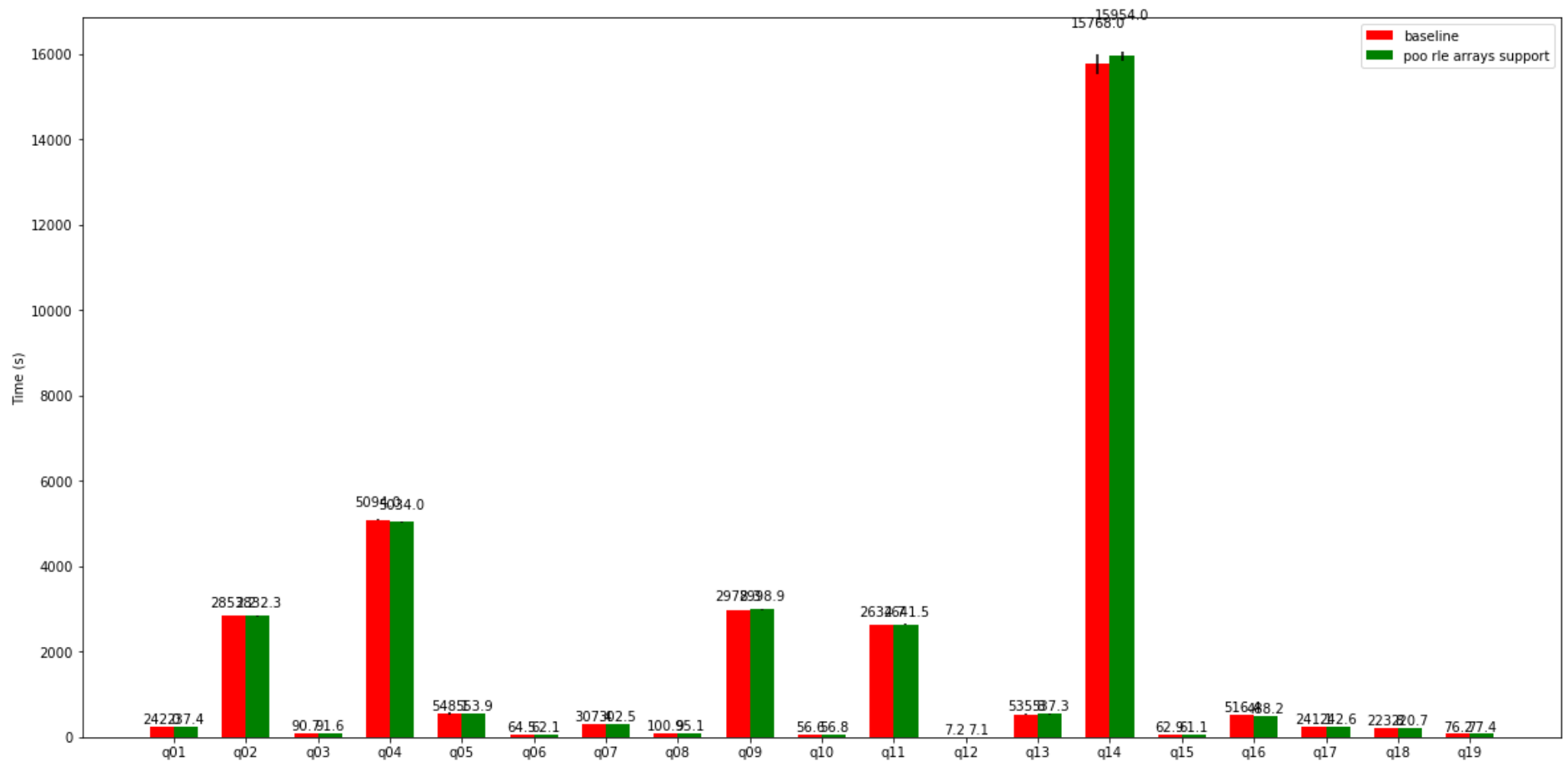
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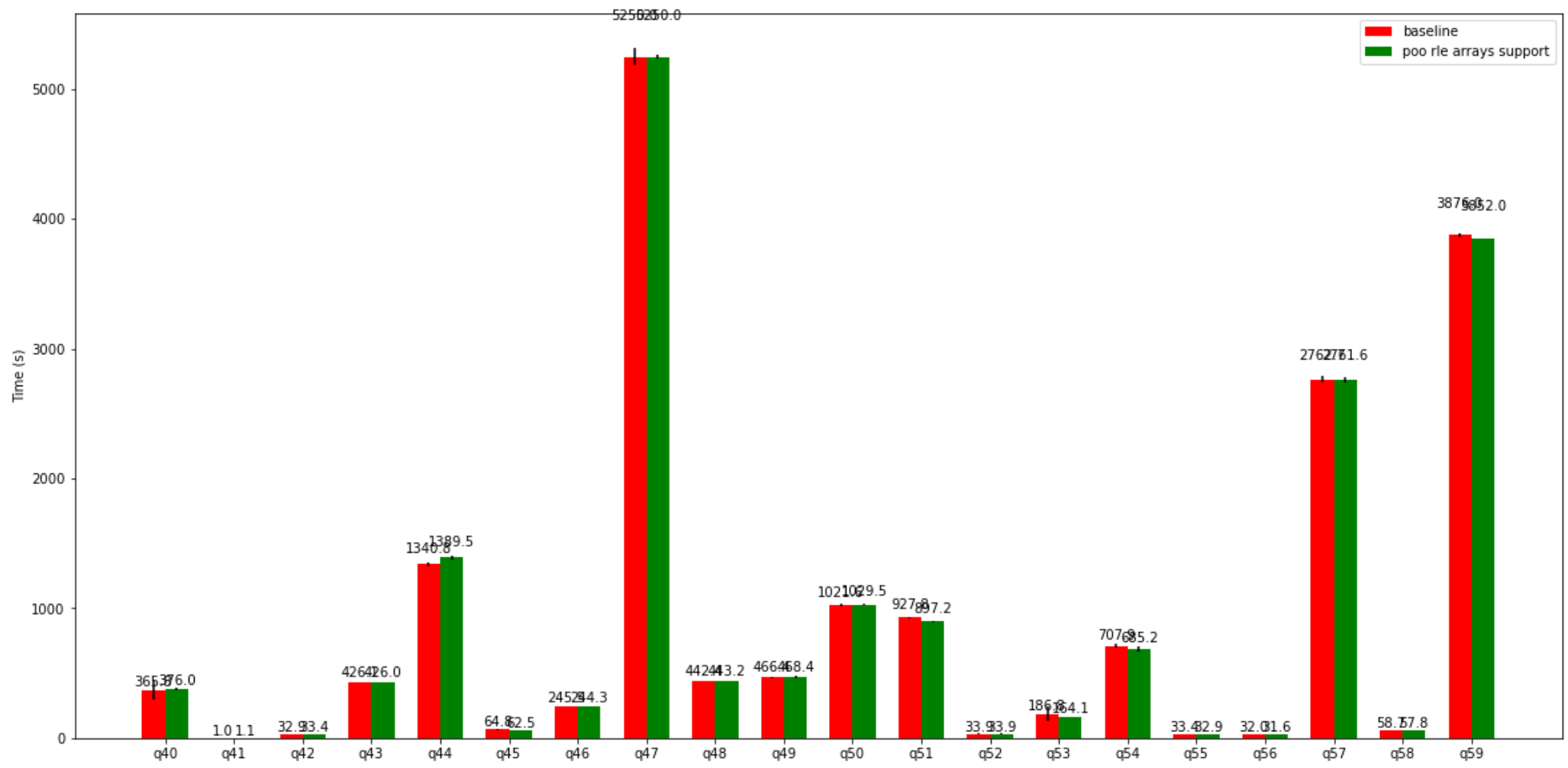
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std       3
min      -9
25%      -4
50%      -2
75%      -1
max       3
Name: % change, dtype: float64

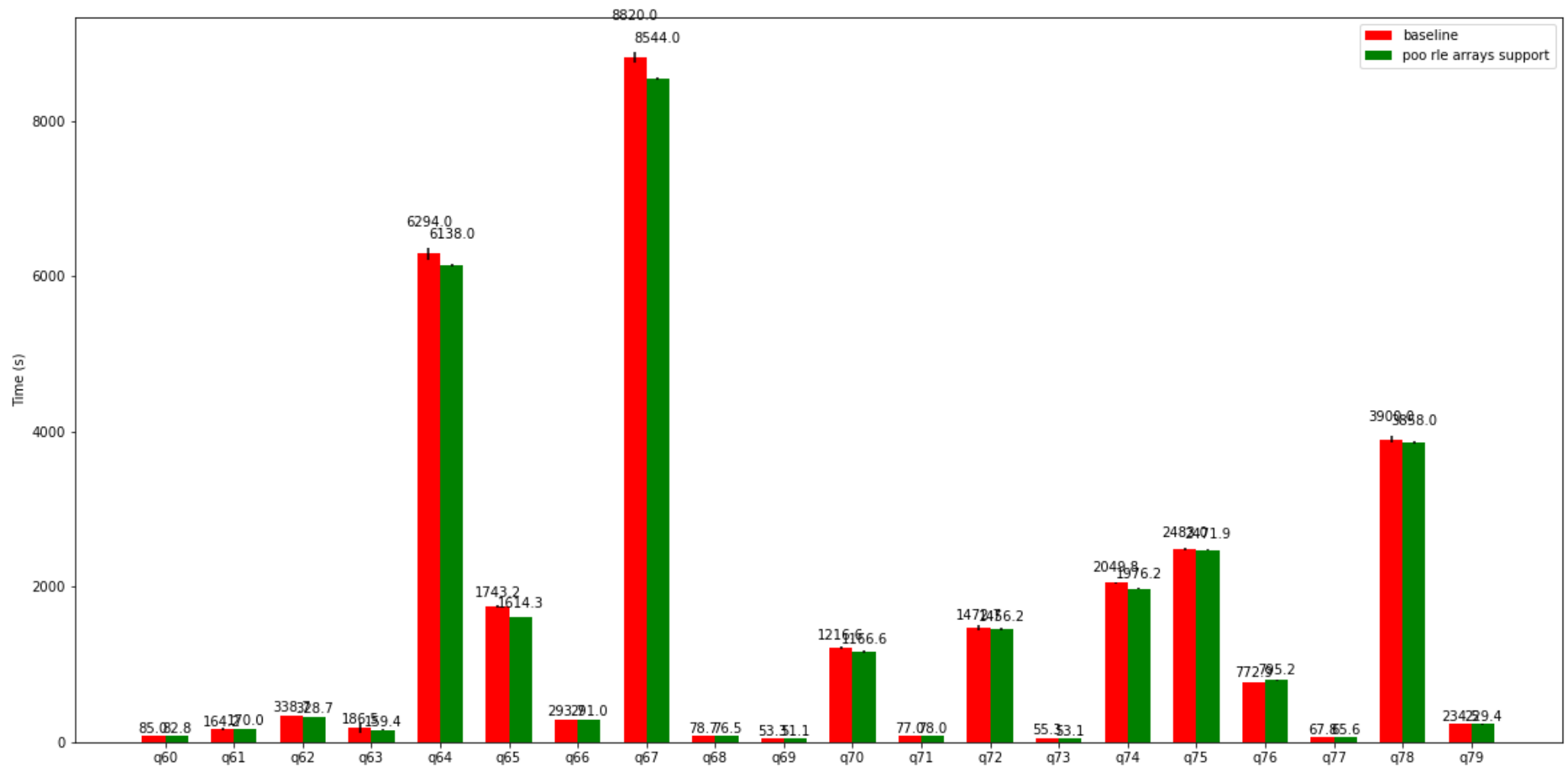
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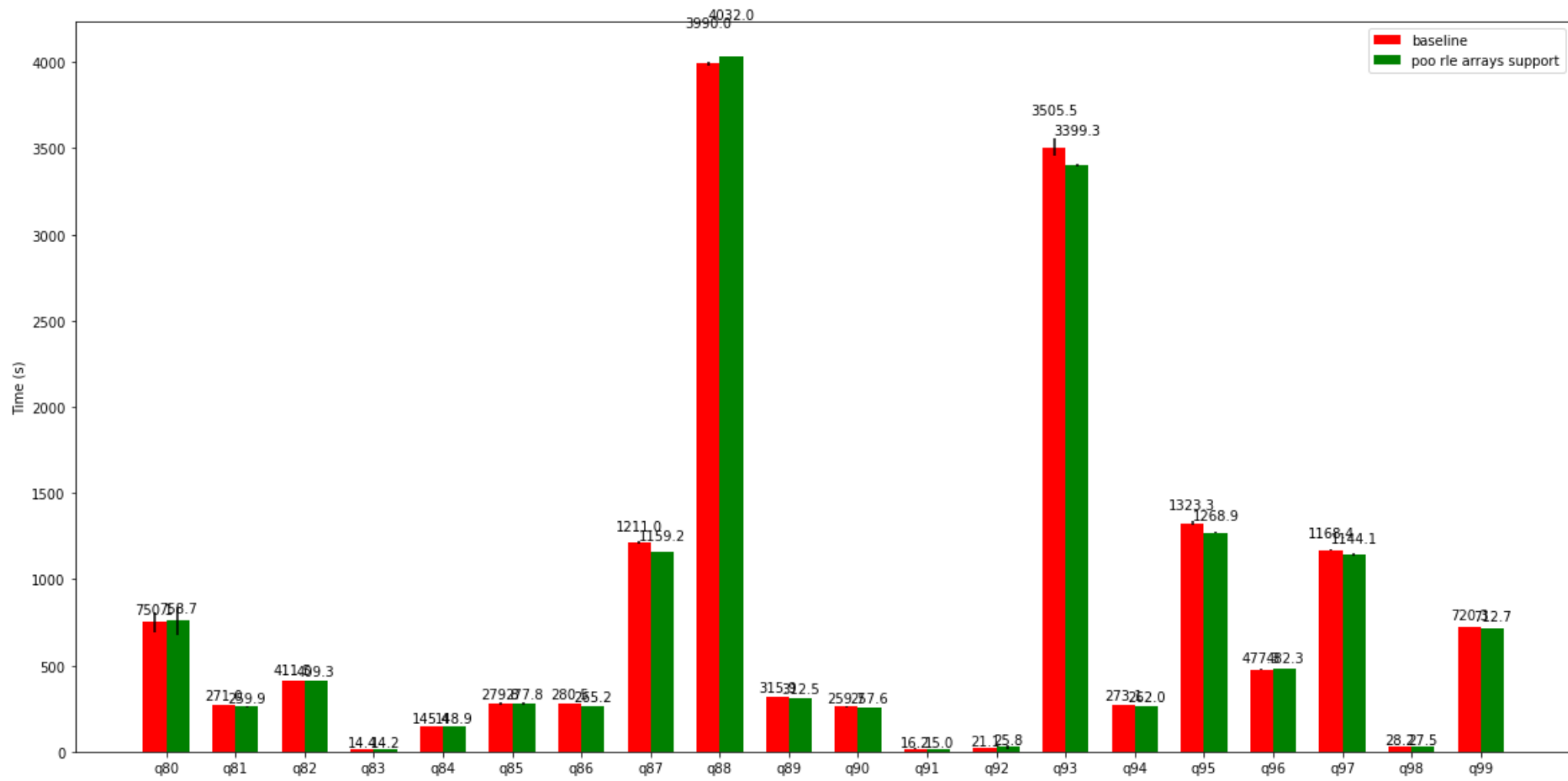
# TPC-DS Comparison (CPU)

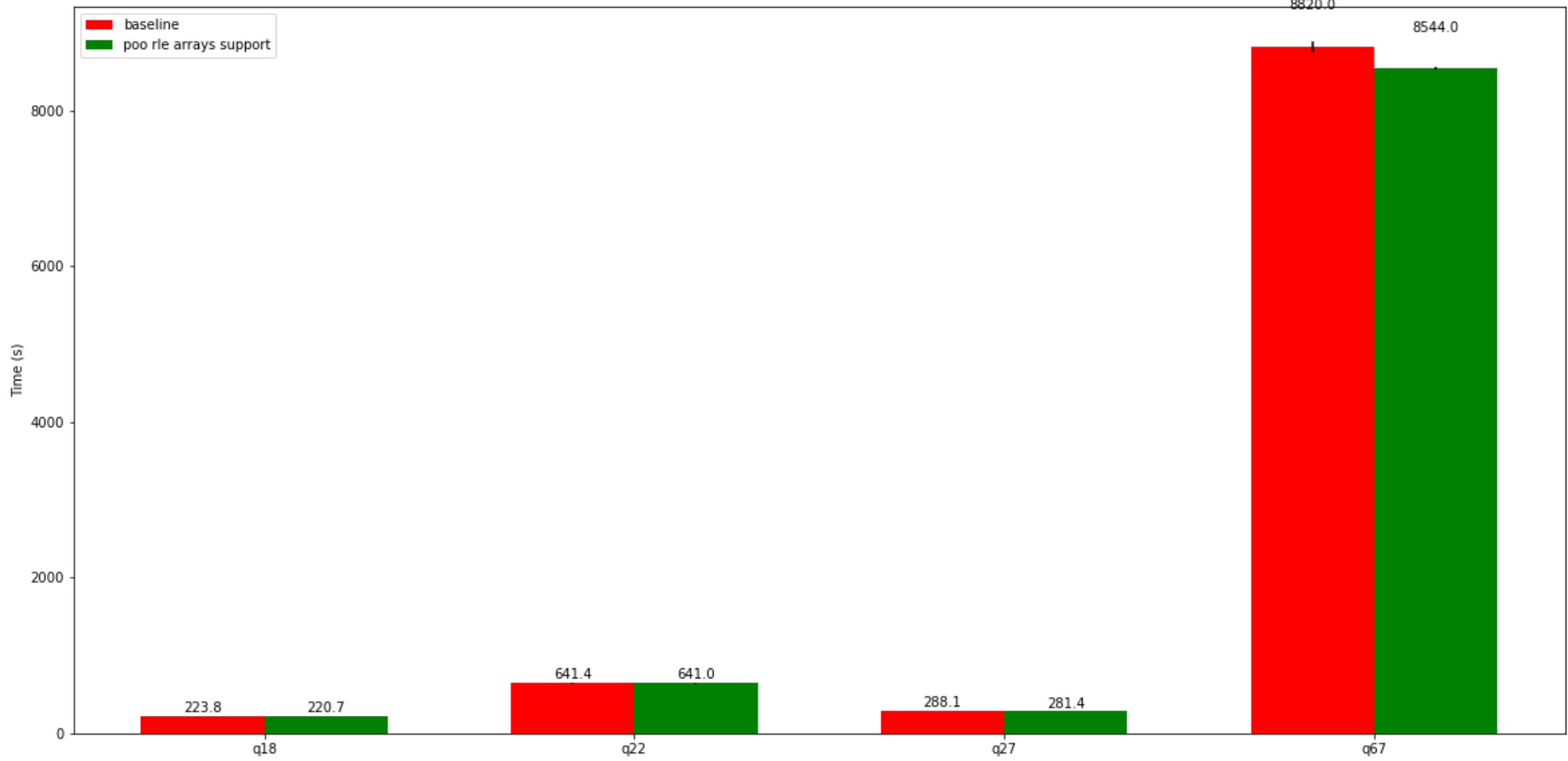












	query	baseline mean	baseline std.dev	poo rle arrays support mean	poo rle arrays support std.dev	% change	baseline std.dev %	poo rle arrays support std.dev %	p-value
62	presto/tpcds: q63	186.50	65.60	159.40	0.31	-14.53	35.17	0.19	0.33544
52	presto/tpcds: q53	186.80	56.93	164.10	0.83	-12.15	30.47	0.50	0.35178
64	presto/tpcds: q65	1743.20	15.36	1614.30	3.92	-7.39	0.88	0.24	0.00000
90	presto/tpcds: q91	16.17	1.84	15.04	1.34	-6.97	11.36	8.89	0.25248
7	presto/tpcds: q08	100.90	0.45	95.10	0.33	-5.75	0.45	0.35	0.00000
15	presto/tpcds: q16	516.40	1.35	488.20	8.10	-5.46	0.26	1.66	0.00001



	query	baseline mean	baseline std.dev	poor arrays support mean	poor arrays support std.dev	% change	baseline std.dev %	poor arrays support std.dev %	p-value
85	presto/tpcds: q86	280.50	1.46	265.20	0.85	-5.45	0.52	0.32	0.00000
34	presto/tpcds: q35	225.20	0.98	215.20	1.81	-4.44	0.44	0.84	0.00000
86	presto/tpcds: q87	1211.00	7.35	1159.20	2.81	-4.28	0.61	0.24	0.00000
94	presto/tpcds: q95	1323.30	11.02	1268.90	3.99	-4.11	0.83	0.31	0.00000
69	presto/tpcds: q70	1216.60	17.41	1166.60	11.74	-4.11	1.43	1.01	0.00017
68	presto/tpcds: q69	53.26	0.44	51.08	1.63	-4.10	0.82	3.20	0.01007
80	presto/tpcds: q81	271.00	1.45	259.90	0.96	-4.10	0.54	0.37	0.00000
93	presto/tpcds: q94	273.10	0.70	262.00	0.49	-4.06	0.26	0.19	0.00000
38	presto/tpcds: q39	61.30	0.70	58.84	0.40	-4.01	1.14	0.67	0.00002
72	presto/tpcds: q73	55.30	0.10	53.09	0.25	-3.99	0.19	0.46	0.00000
5	presto/tpcds: q06	64.50	0.63	62.10	0.50	-3.72	0.98	0.81	0.00003
73	presto/tpcds: q74	2049.80	3.41	1976.20	10.44	-3.59	0.17	0.53	0.00000
44	presto/tpcds: q45	64.80	0.76	62.50	0.70	-3.55	1.17	1.12	0.00028
30	presto/tpcds: q31	401.40	5.20	387.20	5.75	-3.54	1.30	1.49	0.00117
50	presto/tpcds: q51	927.80	6.42	897.20	2.00	-3.30	0.69	0.22	0.00000
76	presto/tpcds: q77	67.80	0.54	65.60	0.62	-3.24	0.79	0.94	0.00006
53	presto/tpcds: q54	707.90	15.29	685.20	17.95	-3.21	2.16	2.62	0.04009
19	presto/tpcds: q20	16.71	0.09	16.18	0.14	-3.17	0.54	0.86	0.00001
66	presto/tpcds: q67	8820.00	64.40	8544.00	18.59	-3.13	0.73	0.22	0.00000

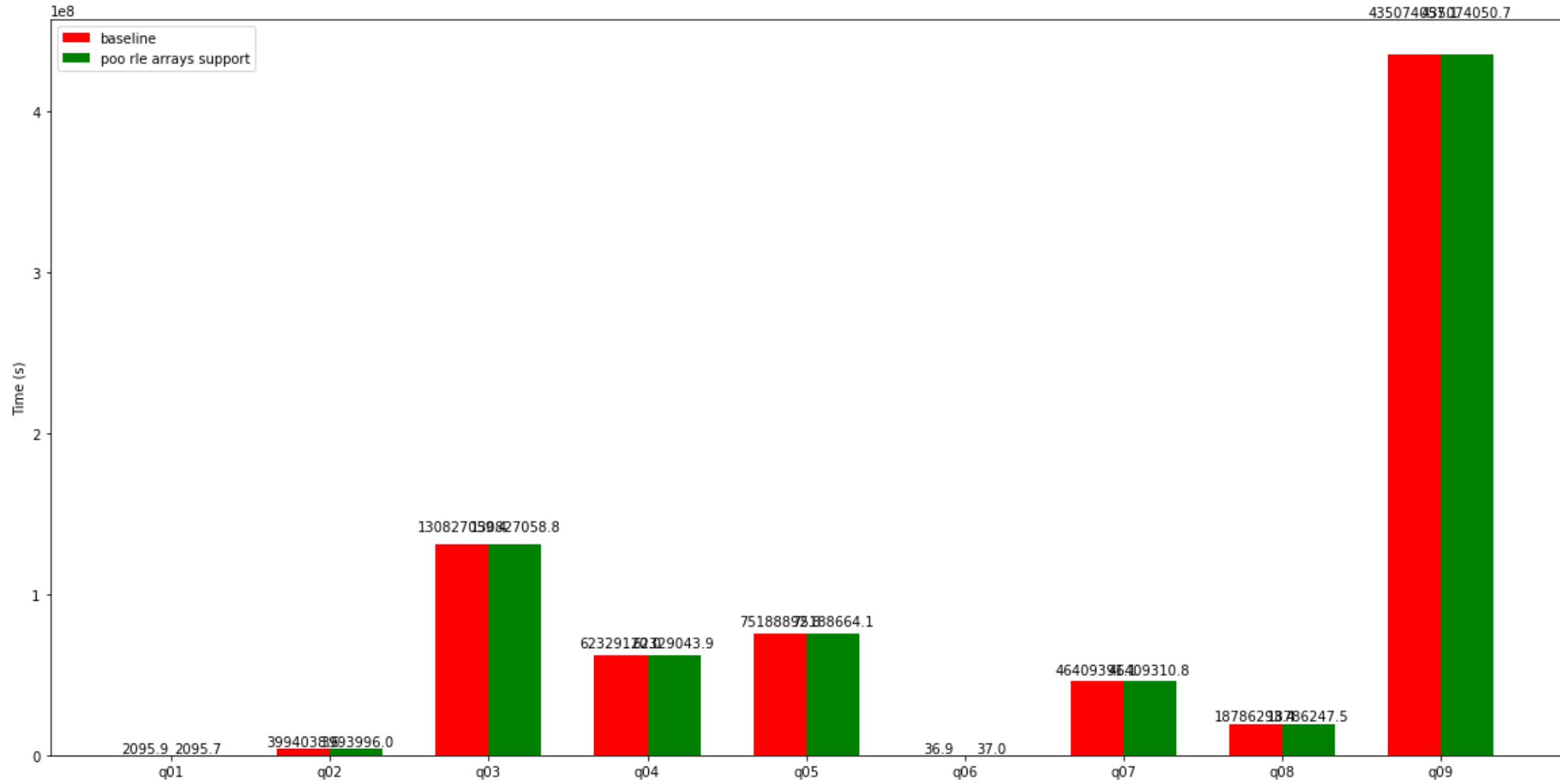
	query	baseline mean	baseline std.dev	poor arrays support mean	poor arrays support std.dev	% change	baseline std.dev %	poor arrays support std.dev %	p-value
92	presto/tpcds:q93	3505.50	50.19	3399.30	7.06	-3.03	1.43	0.21	0.00044
61	presto/tpcds:q62	338.70	1.46	328.70	1.28	-2.95	0.43	0.39	0.00000
14	presto/tpcds:q15	62.90	0.45	61.10	0.45	-2.86	0.72	0.74	0.00004
67	presto/tpcds:q68	78.70	0.70	76.50	0.50	-2.80	0.89	0.66	0.00010
29	presto/tpcds:q30	136.00	1.05	132.30	0.50	-2.72	0.77	0.38	0.00001
37	presto/tpcds:q38	1182.80	3.55	1152.10	2.02	-2.60	0.30	0.18	0.00000
59	presto/tpcds:q60	85.00	1.05	82.80	0.38	-2.59	1.24	0.46	0.00070
32	presto/tpcds:q33	55.13	0.41	53.73	0.30	-2.54	0.74	0.56	0.00005
33	presto/tpcds:q34	146.90	0.70	143.20	0.31	-2.52	0.48	0.22	0.00000
63	presto/tpcds:q64	6294.00	76.93	6138.00	19.72	-2.48	1.22	0.32	0.00071
97	presto/tpcds:q98	28.17	0.27	27.51	0.16	-2.34	0.95	0.57	0.00039
26	presto/tpcds:q27	288.10	0.59	281.40	1.14	-2.33	0.20	0.40	0.00000
78	presto/tpcds:q79	234.50	0.45	229.40	1.18	-2.17	0.19	0.51	0.00000
96	presto/tpcds:q97	1168.40	4.82	1144.10	5.56	-2.08	0.41	0.49	0.00001
0	presto/tpcds:q01	242.00	3.47	237.40	3.05	-1.90	1.43	1.29	0.03497
35	presto/tpcds:q36	282.80	0.31	277.60	0.49	-1.84	0.11	0.18	0.00000
11	presto/tpcds:q12	7.24	0.04	7.11	0.04	-1.73	0.51	0.61	0.00031
82	presto/tpcds:q83	14.41	0.48	14.17	0.71	-1.70	3.31	5.04	0.50065
57	presto/tpcds:q58	58.72	0.50	57.77	0.58	-1.62	0.85	1.00	0.01210

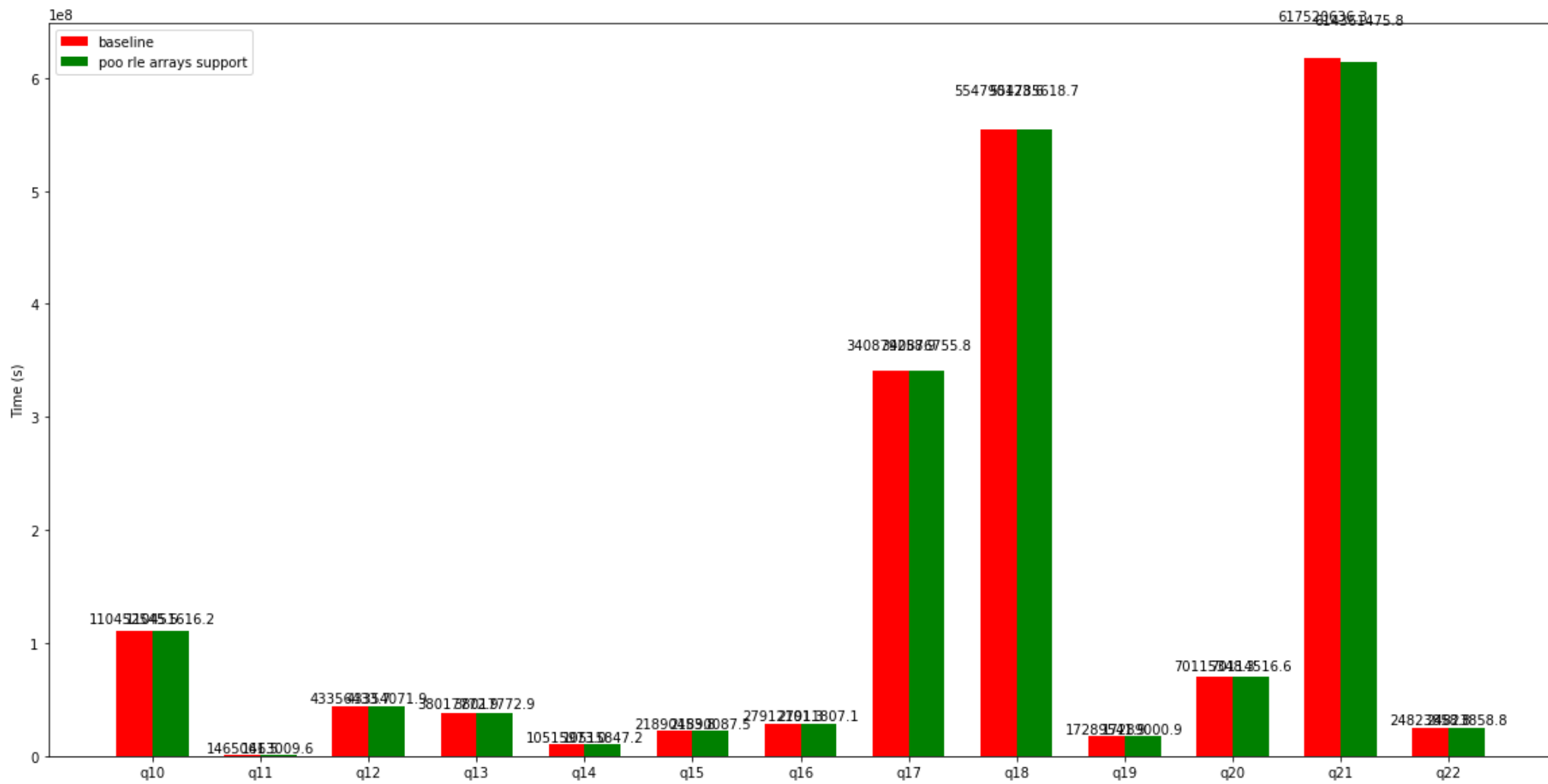
	query	baseline mean	baseline std.dev	poor arrays support mean	poor arrays support std.dev	% change	baseline std.dev %	poor arrays support std.dev %	p-value
6	presto/tpcds:q07	307.40	0.82	302.50	0.45	-1.59	0.27	0.15	0.00000
54	presto/tpcds:q55	33.44	0.09	32.92	0.14	-1.56	0.26	0.42	0.00002
55	presto/tpcds:q56	32.03	0.26	31.57	0.24	-1.42	0.81	0.76	0.01078
22	presto/tpcds:q23	12546.00	81.30	12372.00	29.39	-1.39	0.65	0.24	0.00060
17	presto/tpcds:q18	223.80	1.31	220.70	1.22	-1.39	0.59	0.55	0.00175
3	presto/tpcds:q04	5094.00	19.72	5034.00	14.70	-1.18	0.39	0.29	0.00014
23	presto/tpcds:q24	3276.80	14.55	3239.10	22.68	-1.15	0.44	0.70	0.00647
71	presto/tpcds:q72	1472.70	33.64	1456.20	18.82	-1.12	2.28	1.29	0.31914
77	presto/tpcds:q78	3900.00	49.19	3858.00	14.70	-1.08	1.26	0.38	0.07289
88	presto/tpcds:q89	315.90	1.73	312.50	0.80	-1.08	0.55	0.26	0.00139
98	presto/tpcds:q99	720.30	0.83	712.70	1.28	-1.06	0.11	0.18	0.00000
65	presto/tpcds:q66	293.70	0.63	291.00	0.66	-0.92	0.21	0.23	0.00003
89	presto/tpcds:q90	259.70	0.45	257.60	0.73	-0.81	0.17	0.28	0.00013
1	presto/tpcds:q02	2853.20	1.12	2832.30	1.24	-0.73	0.04	0.04	0.00000
84	presto/tpcds:q85	279.80	5.09	277.80	5.73	-0.71	1.82	2.06	0.53693
58	presto/tpcds:q59	3876.00	18.59	3852.00	0.00	-0.62	0.48	0.00	0.01012
20	presto/tpcds:q21	14.59	0.09	14.50	0.10	-0.59	0.60	0.69	0.13909
81	presto/tpcds:q82	411.50	1.03	409.30	1.03	-0.53	0.25	0.25	0.00420
45	presto/tpcds:q46	245.50	1.76	244.30	1.84	-0.49	0.72	0.75	0.27422

	query	baseline mean	baseline std.dev	poor arrays support mean	poor arrays support std.dev	% change	baseline std.dev %	poor arrays support std.dev %	p-value
74	presto/tpcds:q75	2483.00	11.84	2471.90	5.32	-0.45	0.48	0.22	0.06264
21	presto/tpcds:q22	641.40	2.71	641.00	3.00	-0.06	0.42	0.47	0.81354
56	presto/tpcds:q57	2762.70	27.42	2761.60	17.44	-0.04	0.99	0.63	0.93556
42	presto/tpcds:q43	426.10	0.96	426.00	0.38	-0.02	0.23	0.09	0.81742
46	presto/tpcds:q47	5250.00	66.05	5250.00	14.70	0.00	1.26	0.28	1.00000
51	presto/tpcds:q52	33.86	0.06	33.88	0.15	0.05	0.19	0.45	0.80925
25	presto/tpcds:q26	169.90	0.80	170.20	0.31	0.18	0.47	0.18	0.41051
47	presto/tpcds:q48	442.40	1.64	443.20	1.18	0.18	0.37	0.27	0.35485
9	presto/tpcds:q10	56.62	0.52	56.76	0.68	0.25	0.92	1.20	0.69095
10	presto/tpcds:q11	2634.70	4.70	2641.50	19.89	0.26	0.18	0.75	0.43409
27	presto/tpcds:q28	3346.50	11.61	3355.40	3.34	0.27	0.35	0.10	0.10143
12	presto/tpcds:q13	535.80	1.26	537.30	1.12	0.28	0.23	0.21	0.05436
24	presto/tpcds:q25	165.80	10.48	166.40	14.34	0.36	6.32	8.62	0.93568
48	presto/tpcds:q49	466.40	2.56	468.40	8.26	0.43	0.55	1.76	0.58354
16	presto/tpcds:q17	241.10	3.75	242.60	6.19	0.62	1.55	2.55	0.62238
8	presto/tpcds:q09	2978.30	8.30	2998.90	18.14	0.69	0.28	0.60	0.02988
49	presto/tpcds:q50	1021.60	11.13	1029.50	0.88	0.77	1.09	0.09	0.11380
2	presto/tpcds:q03	90.70	0.24	91.60	0.31	0.99	0.27	0.34	0.00023
95	presto/tpcds:q96	477.30	0.63	482.30	0.96	1.05	0.13	0.20	0.00000



# TPC-H Comparison (Network)





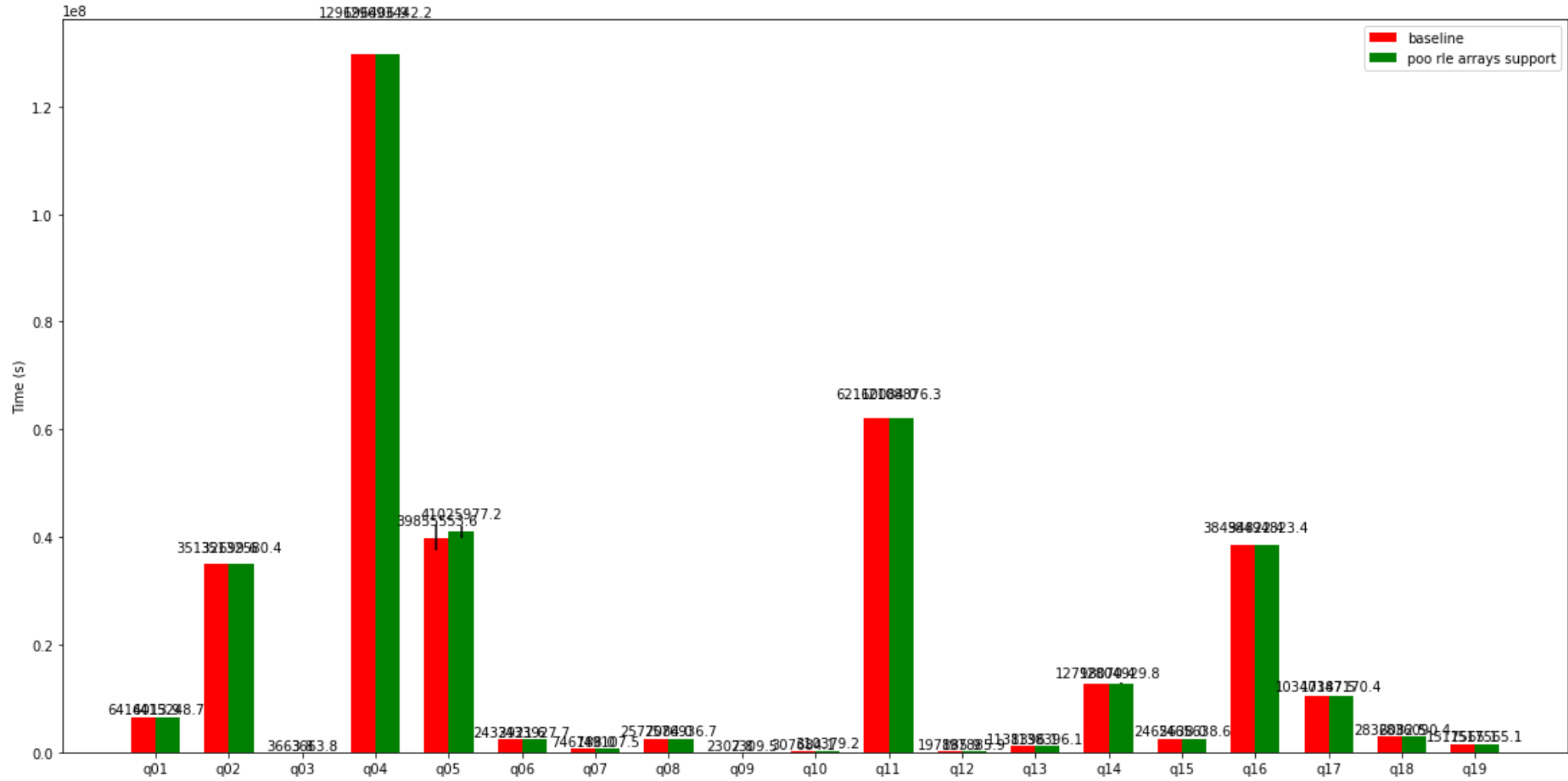
	query	baseline mean	baseline std.dev	poo rle arrays support mean	poo rle arrays support std.dev	% change	baseline std.dev %	poo rle arrays support std.dev %	p-value
20	presto/tpch: q21	617520636.32	7.40	614361475.75	1192.14	-0.51	0.00	0.00	0.00000
10	presto/tpch: q11	1465061.45	4814.60	1463009.59	4646.45	-0.14	0.33	0.32	0.46986
0	presto/tpch: q01	2095.91	0.95	2095.73	1.01	-0.01	0.05	0.05	0.75597
11	presto/tpch: q12	43356433.66	0.00	43354071.89	0.00	-0.01	0.00	0.00	0.00000
18	presto/tpch: q19	17289541.92	0.82	17289000.88	2.28	-0.00	0.00	0.00	0.00000



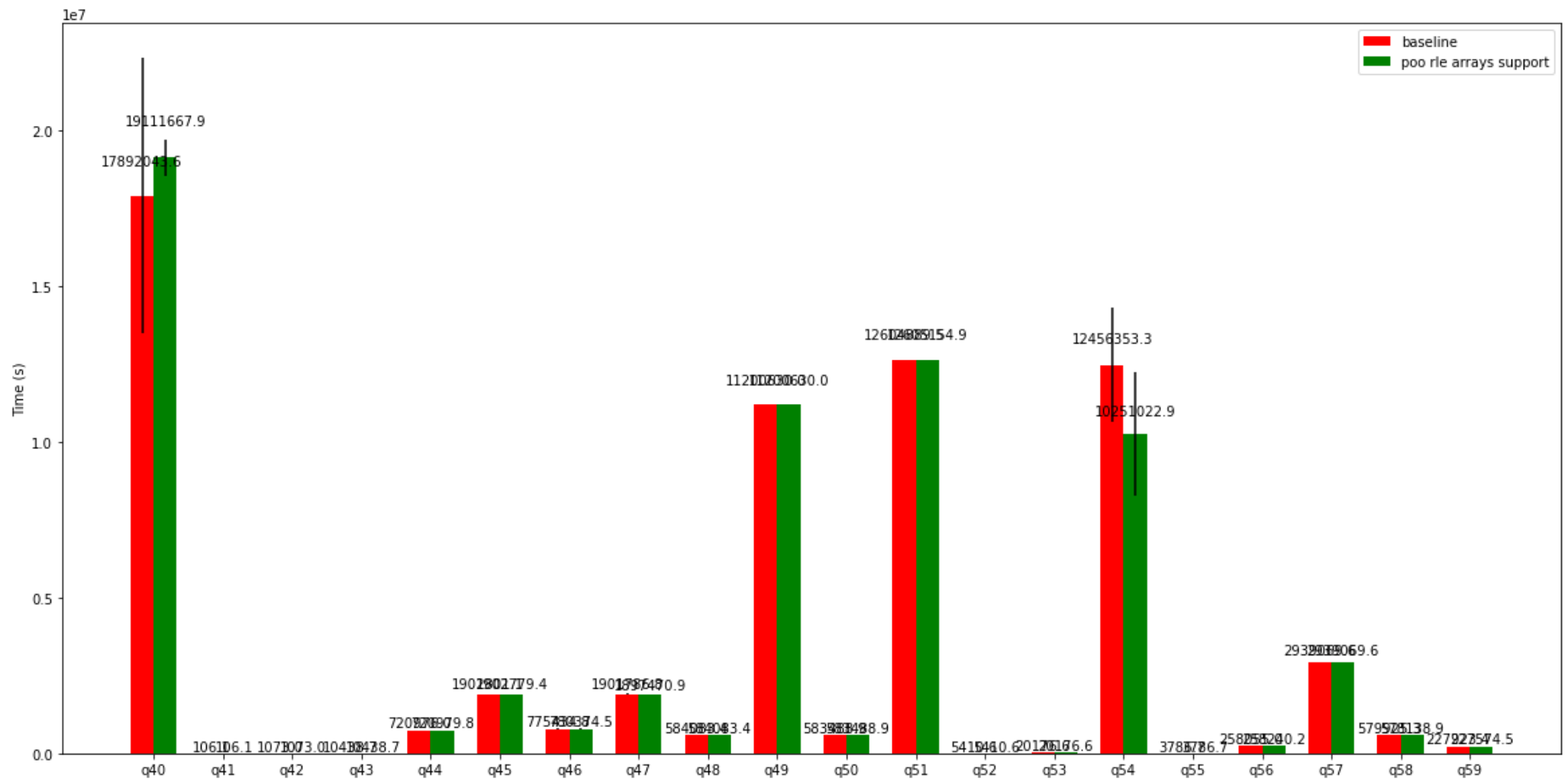


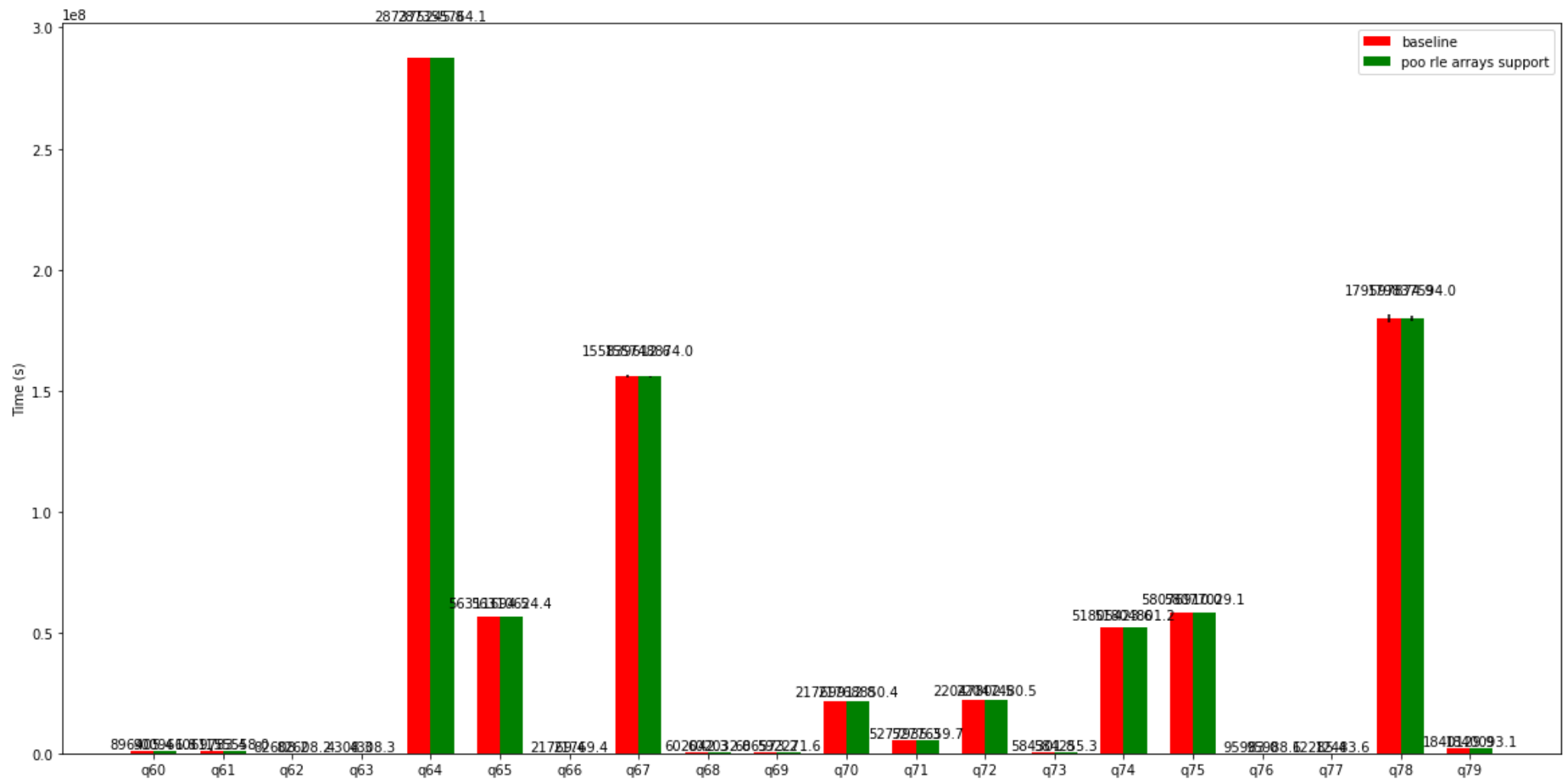
max 0  
Name: % change, dtype: float64

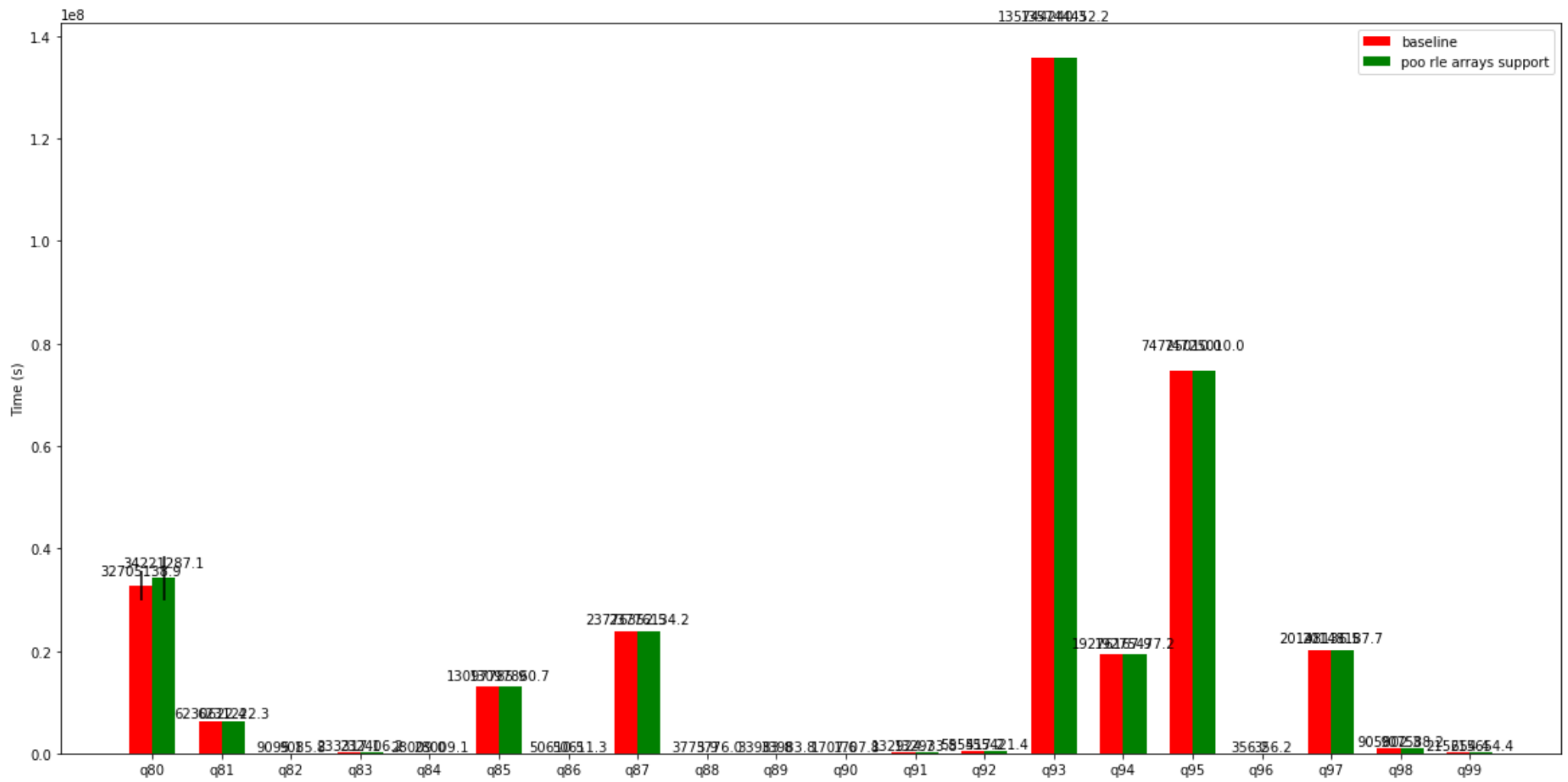
# TPC-DS Comparison (Network)











	query	baseline mean	baseline std.dev	poo rle arrays support mean	poo rle arrays support std.dev	% change	baseline std.dev %	poo rle arrays support std.dev %	p-value
53	presto/tpcds: q54	12456353.34	1830365.60	10251022.87	1989941.21	-17.70	14.69	19.41	0.07364
68	presto/tpcds: q69	606573.24	513.25	592271.60	22110.47	-2.36	0.08	3.73	0.14428
82	presto/tpcds: q83	233317.10	6146.94	232406.23	4226.36	-0.39	2.63	1.82	0.77099
19	presto/tpcds: q20	547395.48	10707.53	545277.19	6003.66	-0.39	1.96	1.10	0.68147
57	presto/tpcds: q58	579925.31	2940.73	578138.91	1548.76	-0.31	0.51	0.27	0.21736

	query	baseline mean	baseline std.dev	pool arrays support mean	pool arrays support std.dev	% change	baseline std.dev %	pool arrays support std.dev %	p-value
46	presto/tpcds:q47	1901786.80	10571.66	1897470.94	0.00	-0.23	0.56	0.00	0.34089
58	presto/tpcds:q59	227923.35	377.03	227574.52	732.67	-0.15	0.17	0.32	0.32416
81	presto/tpcds:q82	9095.11	13.13	9085.80	7.12	-0.10	0.14	0.08	0.15799
66	presto/tpcds:q67	155839612.56	418557.59	155748874.05	181576.13	-0.06	0.27	0.12	0.63665
95	presto/tpcds:q96	356.22	0.19	356.16	0.22	-0.02	0.05	0.06	0.62629
22	presto/tpcds:q23	277192303.71	49614.91	277158555.36	56554.24	-0.01	0.02	0.02	0.29760
20	presto/tpcds:q21	146199.94	0.00	146183.13	0.00	-0.01	0.00	0.00	0.00000
72	presto/tpcds:q73	584301.77	0.01	584255.33	0.01	-0.01	0.00	0.00	0.00000
33	presto/tpcds:q34	590015.13	0.00	589968.68	0.00	-0.01	0.00	0.00	0.00000
21	presto/tpcds:q22	13413244.95	0.00	13412314.77	0.00	-0.01	0.00	0.00	0.00000
63	presto/tpcds:q64	287375245.79	77543.75	287355764.09	71050.58	-0.01	0.03	0.02	0.65971
7	presto/tpcds:q08	2577084.04	50.16	2576936.70	96.73	-0.01	0.00	0.00	0.00785
70	presto/tpcds:q71	5277935.32	462.10	5277659.70	473.60	-0.01	0.01	0.01	0.33164
69	presto/tpcds:q70	21769912.82	0.49	21768850.39	1.40	-0.00	0.00	0.00	0.00000
93	presto/tpcds:q94	19276167.89	1.42	19275477.22	3.74	-0.00	0.00	0.00	0.00000
38	presto/tpcds:q39	2165591.58	5.20	2165518.48	5.13	-0.00	0.00	0.00	0.00000
26	presto/tpcds:q27	79730.01	6.13	79727.39	6.14	-0.00	0.01	0.01	0.47644
30	presto/tpcds:q31	13792114.31	961.09	13791735.90	719.21	-0.00	0.01	0.01	0.45788
3	presto/tpcds:q04	129696406.87	484.74	129693442.23	376.60	-0.00	0.00	0.00	0.00000

	query	baseline mean	baseline std.dev	pool arrays support mean	pool arrays support std.dev	% change	baseline std.dev %	pool arrays support std.dev %	p-value
78	presto/tpcds:q79	1840129.86	3.02	1840093.14	0.13	-0.00	0.00	0.00	0.00000
10	presto/tpcds:q11	62110083.98	22.86	62108876.34	45.87	-0.00	0.00	0.00	0.00000
64	presto/tpcds:q65	56311694.46	1498.77	56310624.39	478.96	-0.00	0.00	0.00	0.12671
23	presto/tpcds:q24	33131421.91	44.47	33130803.34	16.59	-0.00	0.00	0.00	0.00000
67	presto/tpcds:q68	602042.34	26.14	602032.76	24.29	-0.00	0.00	0.00	0.52533
71	presto/tpcds:q72	22047802.47	803.25	22047480.49	733.99	-0.00	0.00	0.00	0.48517
35	presto/tpcds:q36	869628.08	61.20	869616.32	46.26	-0.00	0.01	0.01	0.71507
29	presto/tpcds:q30	3076202.86	18.15	3076161.25	47.39	-0.00	0.00	0.00	0.07239
73	presto/tpcds:q74	51805423.64	201.13	51804801.24	753.41	-0.00	0.00	0.00	0.07908
44	presto/tpcds:q45	1902801.08	16.75	1902779.39	12.08	-0.00	0.00	0.00	0.02771
37	presto/tpcds:q38	23776390.46	151.23	23776136.88	207.23	-0.00	0.00	0.00	0.03599
86	presto/tpcds:q87	23776352.53	226.83	23776134.20	174.14	-0.00	0.00	0.00	0.09099
1	presto/tpcds:q02	35132699.57	150.42	35132580.43	49.61	-0.00	0.00	0.00	0.09520
16	presto/tpcds:q17	10347187.48	76.78	10347170.45	28.81	-0.00	0.00	0.00	0.62196
27	presto/tpcds:q28	3182923.19	4.46	3182922.57	5.34	-0.00	0.00	0.00	0.82922
54	presto/tpcds:q55	3786.73	0.00	3786.73	0.00	0.00	0.00	0.00	nan
56	presto/tpcds:q57	2939069.58	0.00	2939069.58	0.00	0.00	0.00	0.00	nan
49	presto/tpcds:q50	583488.94	0.00	583488.94	0.00	0.00	0.00	0.00	nan
62	presto/tpcds:q63	4308.33	0.00	4308.33	0.00	0.00	0.00	0.00	nan

	query	baseline mean	baseline std.dev	pool arrays support mean	pool arrays support std.dev	% change	baseline std.dev %	pool arrays support std.dev %	p-value
65	presto/tpcds:q66	21769.45	0.00	21769.45	0.00	0.00	0.00	0.00	nan
52	presto/tpcds:q53	20176.63	0.00	20176.63	0.00	0.00	0.00	0.00	nan
88	presto/tpcds:q89	33983.81	0.00	33983.81	0.00	0.00	0.00	0.00	nan
94	presto/tpcds:q95	74725010.00	0.00	74725010.00	0.00	0.00	0.00	0.00	nan
61	presto/tpcds:q62	82608.21	0.00	82608.21	0.00	0.00	0.00	0.00	nan
51	presto/tpcds:q52	5410.64	0.00	5410.64	0.00	0.00	0.00	0.00	nan
98	presto/tpcds:q99	215654.43	0.00	215654.43	0.00	0.00	0.00	0.00	nan
36	presto/tpcds:q37	2504.65	0.00	2504.65	0.00	0.00	0.00	0.00	nan
18	presto/tpcds:q19	1517565.07	0.00	1517565.07	0.00	0.00	0.00	0.00	nan
24	presto/tpcds:q25	6781281.96	0.00	6781281.96	0.00	0.00	0.00	0.00	nan
11	presto/tpcds:q12	197885.88	0.00	197885.88	0.00	0.00	0.00	0.00	nan
40	presto/tpcds:q41	106.10	0.00	106.10	0.00	0.00	0.00	0.00	nan
41	presto/tpcds:q42	1072.95	0.00	1072.95	0.00	0.00	0.00	0.00	nan
12	presto/tpcds:q13	1138396.15	0.00	1138396.15	0.00	0.00	0.00	0.00	nan
2	presto/tpcds:q03	3663.83	0.00	3663.83	0.00	0.00	0.00	0.00	nan
48	presto/tpcds:q49	11200630.03	0.72	11200630.03	0.72	0.00	0.00	0.00	1.00000
47	presto/tpcds:q48	584083.40	0.00	584083.40	0.00	0.00	0.00	0.00	nan
42	presto/tpcds:q43	10438.68	0.00	10438.68	0.00	0.00	0.00	0.00	nan
15	presto/tpcds:q16	38494822.38	3.52	38494823.36	5.75	0.00	0.00	0.00	0.72908

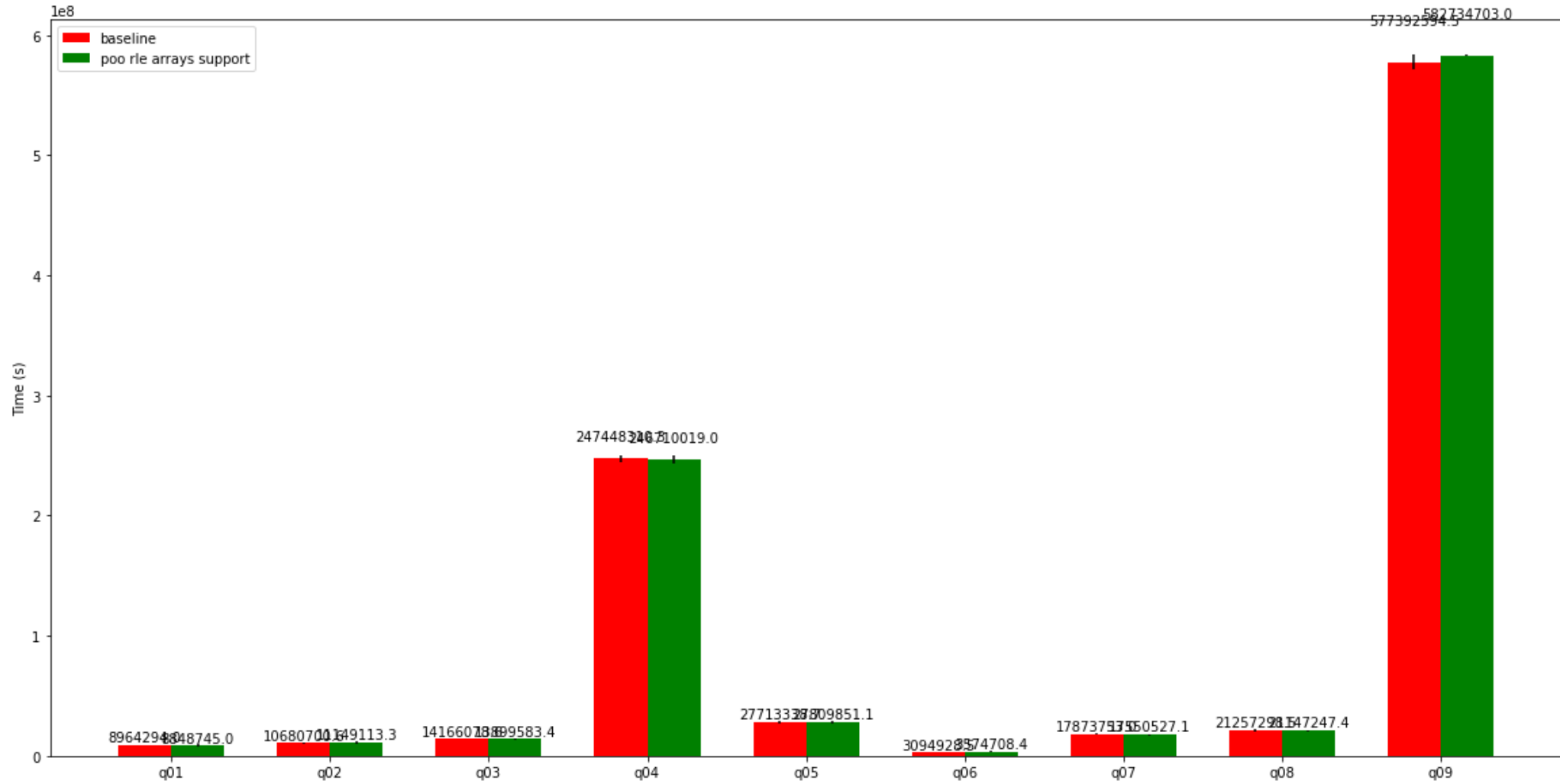


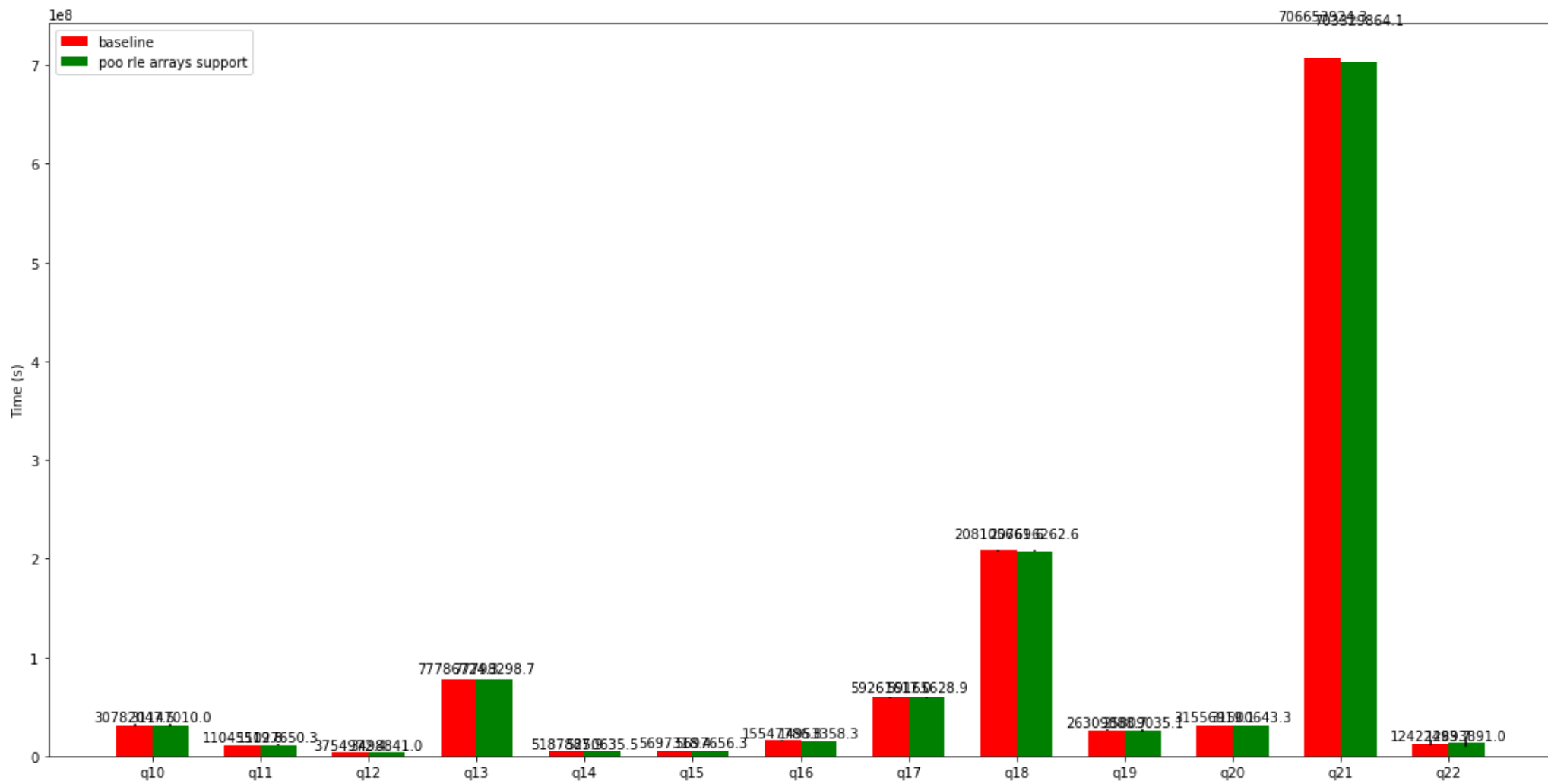
	query	baseline mean	baseline std.dev	pooler arrays support mean	pooler arrays support std.dev	% change	baseline std.dev %	pooler arrays support std.dev %	p-value
14	presto/tpcds:q15	2465638.00	7.03	2465638.61	11.78	0.00	0.00	0.00	0.91569
83	presto/tpcds:q84	28009.03	0.05	28009.05	0.00	0.00	0.00	0.00	0.34089
28	presto/tpcds:q29	4591054.10	11.35	4591058.73	14.36	0.00	0.00	0.00	0.54901
92	presto/tpcds:q93	135744240.33	51.51	135744452.17	237.40	0.00	0.00	0.00	0.05843
74	presto/tpcds:q75	58076910.02	73.39	58077029.12	175.49	0.00	0.00	0.00	0.15612
5	presto/tpcds:q06	2433921.57	1.29	2433927.70	9.53	0.00	0.00	0.00	0.14941
96	presto/tpcds:q97	20148136.45	54.01	20148187.67	41.55	0.00	0.00	0.00	0.09546
17	presto/tpcds:q18	2836082.46	36.18	2836090.41	33.13	0.00	0.00	0.00	0.69972
43	presto/tpcds:q44	720975.98	19.60	720979.77	12.76	0.00	0.00	0.00	0.70014
84	presto/tpcds:q85	13097785.87	186.75	13097860.66	3.85	0.00	0.00	0.00	0.34985
31	presto/tpcds:q32	677169.73	0.00	677174.60	0.00	0.00	0.00	0.00	0.00000
91	presto/tpcds:q92	555417.19	0.00	555421.44	0.00	0.00	0.00	0.00	0.00000
85	presto/tpcds:q86	50610.46	4.70	50611.26	2.49	0.00	0.01	0.00	0.71804
50	presto/tpcds:q51	12604889.51	83.19	12605154.89	160.57	0.00	0.00	0.00	0.00489
87	presto/tpcds:q88	3775.88	1.60	3776.00	1.05	0.00	0.04	0.03	0.87606
75	presto/tpcds:q76	95983.01	151.56	95988.64	153.60	0.01	0.16	0.16	0.95031
90	presto/tpcds:q91	132924.73	31.64	132933.84	27.17	0.01	0.02	0.02	0.60443
34	presto/tpcds:q35	4347574.93	393.02	4347991.81	622.46	0.01	0.01	0.01	0.19553
80	presto/tpcds:q81	6230622.38	154.91	6231222.28	64.18	0.01	0.00	0.00	0.00001



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75% 0  
max 8  
Name: % change, dtype: float64

## TPC-H Comparison (Peak memory)



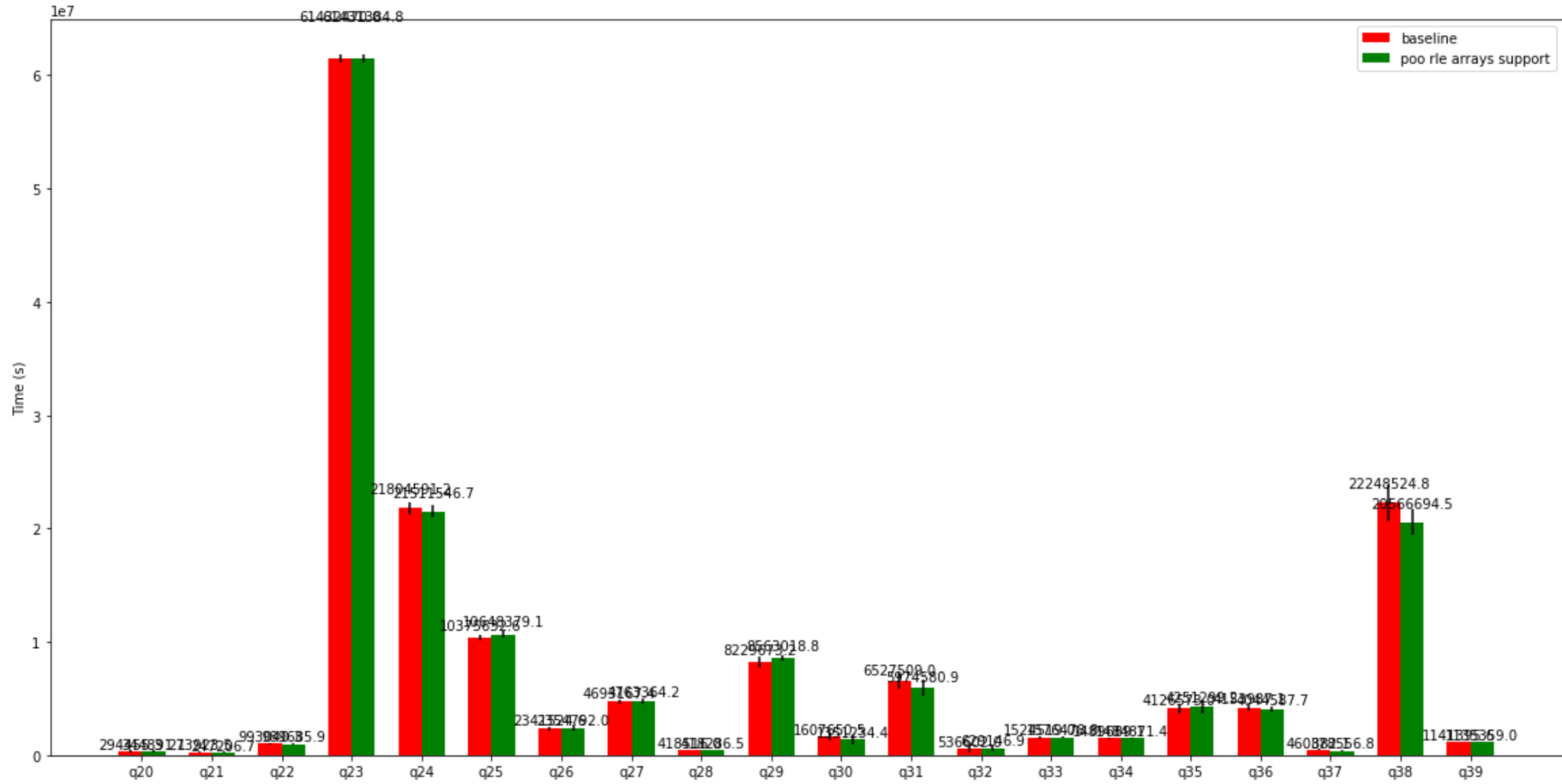


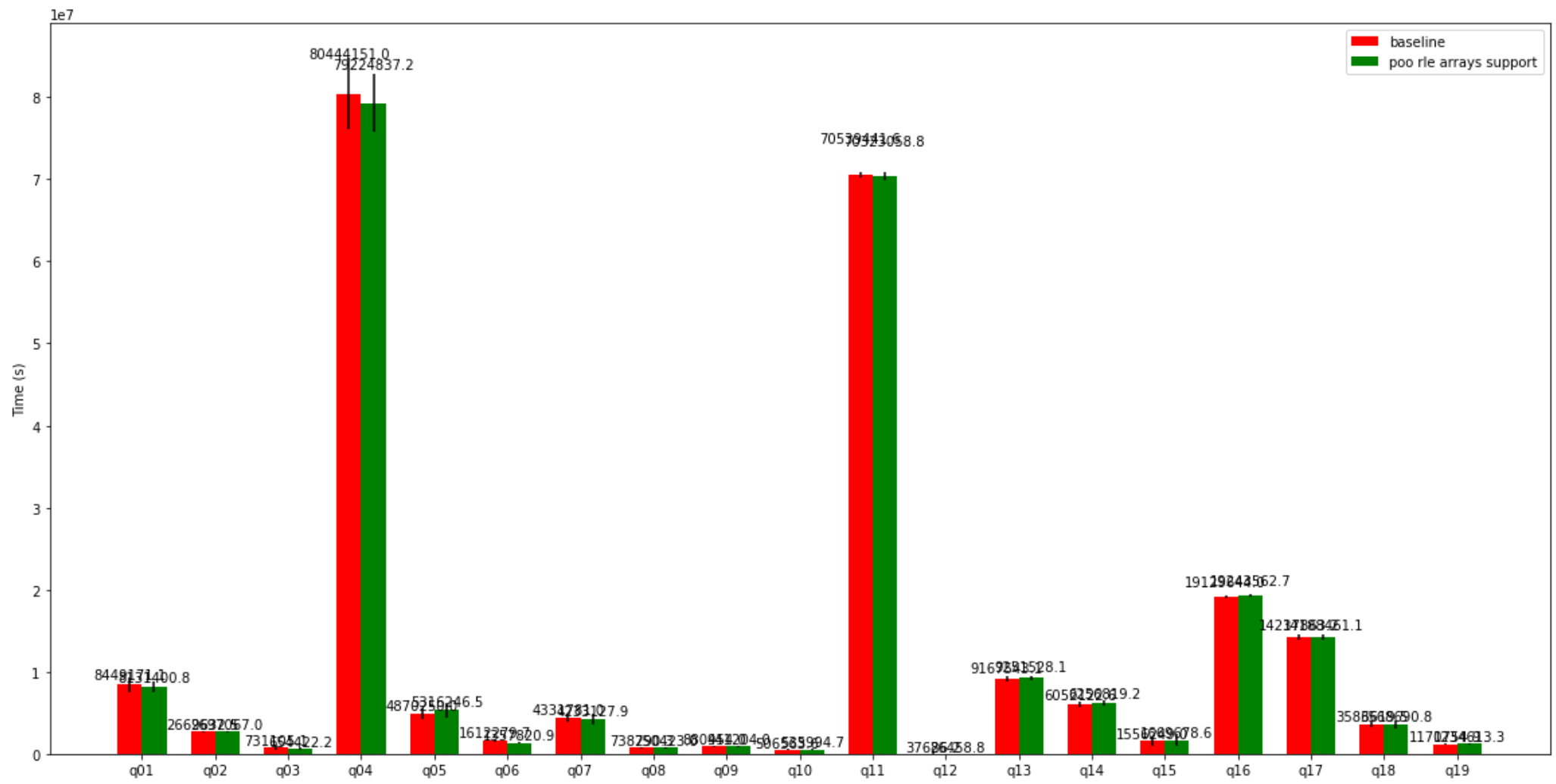
	query	baseline mean	baseline std.dev	poo rle arrays support mean	poo rle arrays support std.dev	% change	baseline std.dev %	poo rle arrays support std.dev %	p-value
11	presto/tpch: q12	3754972.39	254682.43	3498840.97	160935.78	-6.82	6.78	4.60	0.06393
15	presto/tpch: q16	15547786.75	274086.75	14953358.32	422805.51	-3.82	1.76	2.83	0.01612
18	presto/tpch: q19	26309888.66	897954.38	25809035.12	1252581.76	-1.90	3.41	4.85	0.44450
2	presto/tpch: q03	14166078.63	168682.11	13899583.35	250465.34	-1.88	1.19	1.80	0.05595
6	presto/tpch: q07	17873753.01	592044.38	17550527.06	667322.62	-1.81	3.31	3.80	0.39565

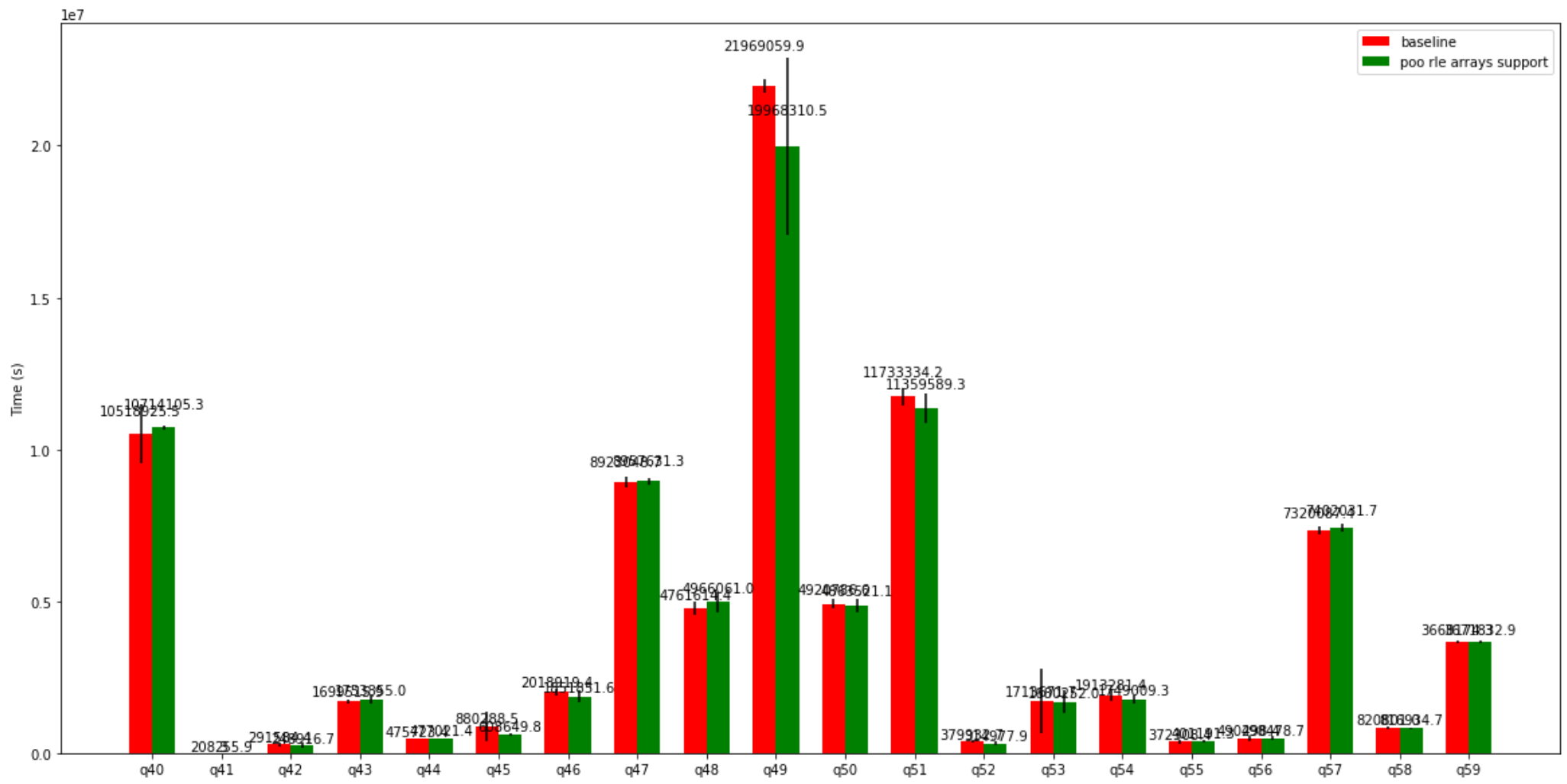
	query	baseline mean	baseline std.dev	poor arrays support mean	poor arrays support std.dev	% change	baseline std.dev %	poor arrays support std.dev %	p-value
0	presto/tpch: q01	8964294.05	217718.73	8848744.95	676521.33	-1.29	2.43	7.65	0.69881
7	presto/tpch: q08	21257298.46	1520598.92	21147247.39	588960.90	-0.52	7.15	2.79	0.87199
20	presto/tpch: q21	706653924.26	29164.11	703329864.07	28549.95	-0.47	0.00	0.00	0.00000
3	presto/tpch: q04	247448310.29	2647228.09	246710018.99	2861267.51	-0.30	1.07	1.16	0.65263
17	presto/tpch: q18	208105661.56	848102.12	207696262.57	801173.44	-0.20	0.41	0.39	0.41017
19	presto/tpch: q20	31556919.12	158212.08	31500643.31	109439.59	-0.18	0.50	0.35	0.49005
16	presto/tpch: q17	59261617.02	538660.48	59165628.92	263430.58	-0.16	0.91	0.45	0.70320
10	presto/tpch: q11	11045519.82	273223.94	11027650.29	335798.68	-0.16	2.47	3.05	0.92146
14	presto/tpch: q15	5697318.37	48295.71	5697656.34	40723.96	0.01	0.85	0.71	0.98980
12	presto/tpch: q13	77786724.28	91856.05	77798298.67	79614.42	0.01	0.12	0.10	0.82028
4	presto/tpch: q05	27713338.69	1140118.14	27809851.10	831356.81	0.35	4.11	2.99	0.87028
8	presto/tpch: q09	577392594.48	6266342.34	582734703.03	591499.26	0.93	1.09	0.10	0.06431
9	presto/tpch: q10	30782047.47	1106245.76	31147010.04	792347.13	1.19	3.59	2.54	0.52603
13	presto/tpch: q14	5187887.87	60471.92	5250635.48	119450.47	1.21	1.17	2.27	0.27769
21	presto/tpch: q22	12422493.67	1816827.36	12893891.02	2994949.45	3.79	14.63	23.23	0.74848
1	presto/tpch: q02	10680700.62	435628.27	11149113.27	788666.81	4.39	4.08	7.07	0.23166
5	presto/tpch: q06	3094928.49	198398.31	3574708.44	258931.56	15.50	6.41	7.24	0.00483

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std 4  
min -7  
25% -1  
50% -0  
75% 1

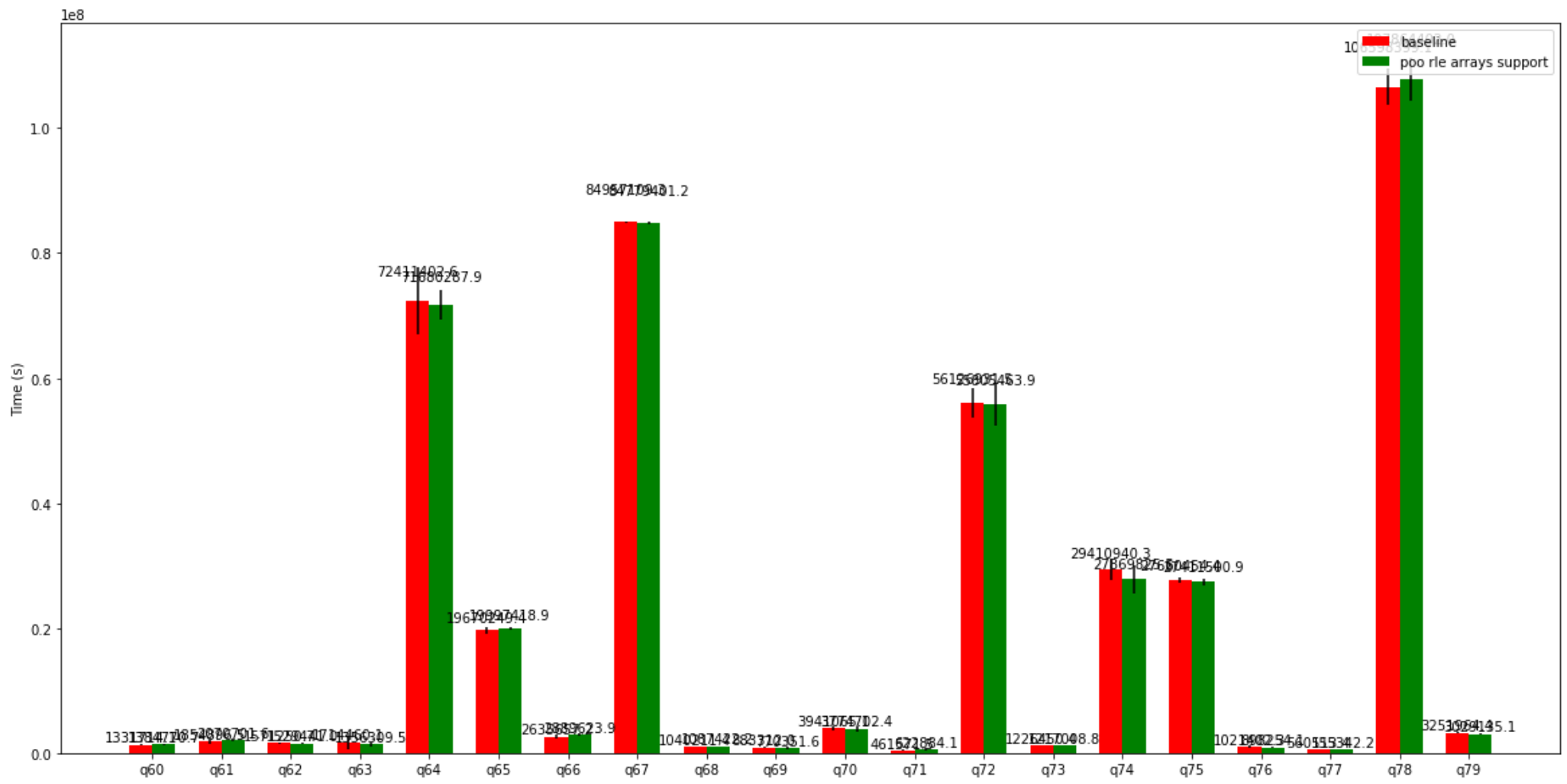
# TPC-DS Comparison (Peak memory)

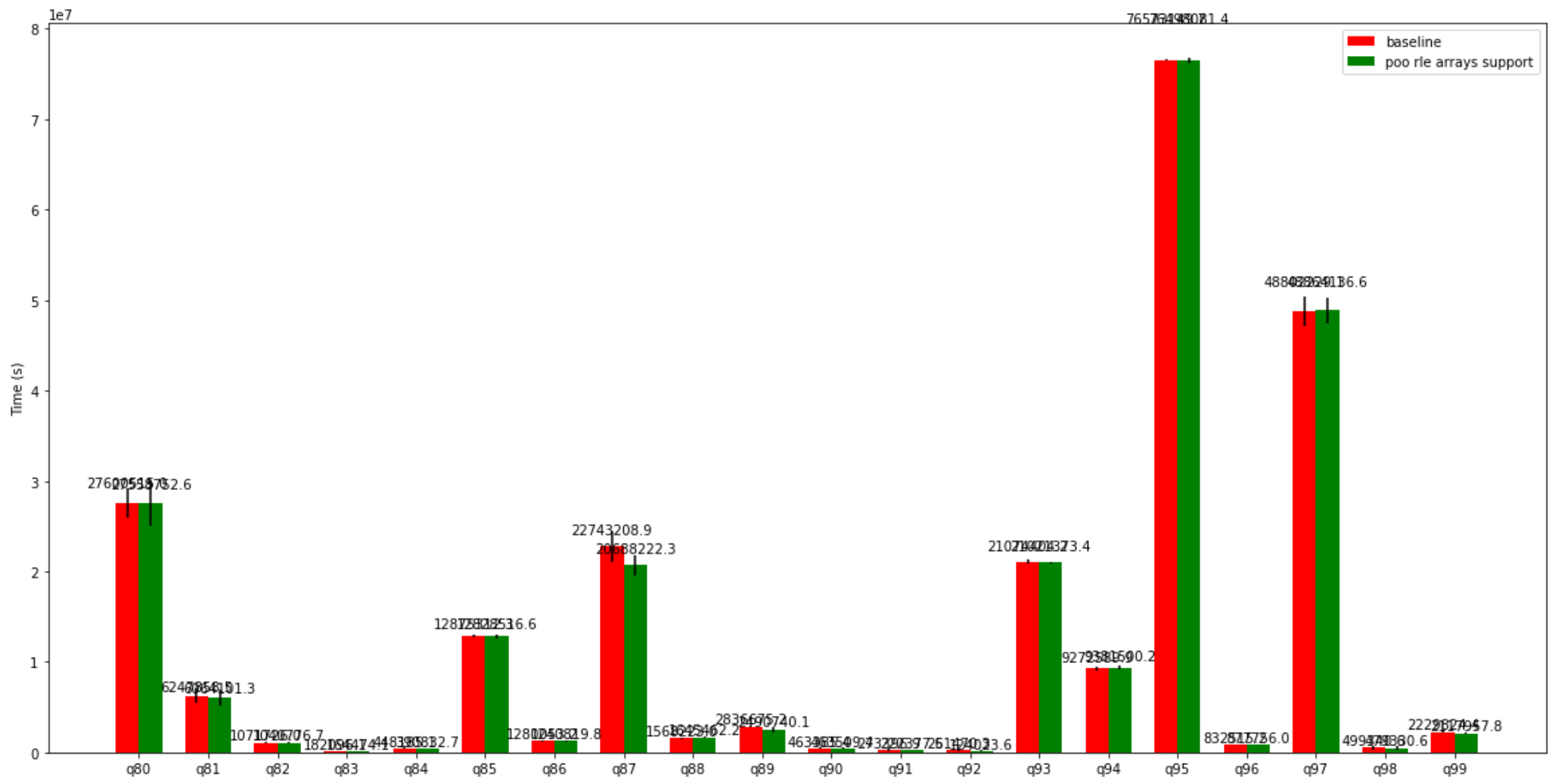


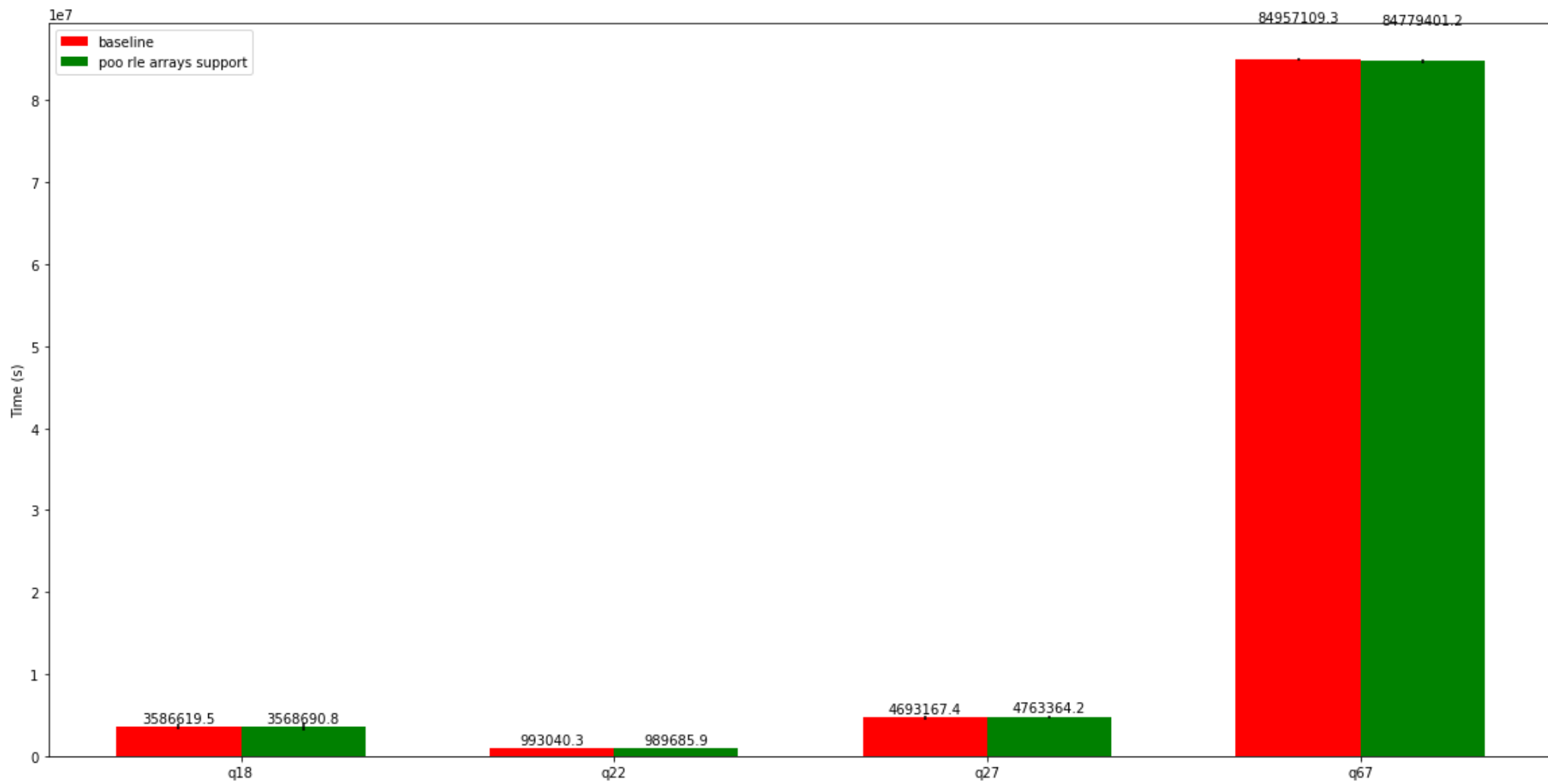












	query	baseline mean	baseline std.dev	poo rle arrays support mean	poo rle arrays support std.dev	% change	baseline std.dev %	poo rle arrays support std.dev %	p-value
91	presto/tpcds: q92	251470.28	143791.63	124023.61	70549.18	-50.68	57.18	56.88	0.07987
44	presto/tpcds: q45	880288.53	483882.72	608649.80	32602.36	-30.86	54.97	5.36	0.20007
11	presto/tpcds: q12	37686.17	15207.09	26458.81	7057.60	-29.79	40.35	26.67	0.13196
62	presto/tpcds: q63	1714460.06	1095715.34	1356309.47	361224.42	-20.89	63.91	26.63	0.46457
90	presto/tpcds: q91	273396.91	100449.45	222377.57	23473.73	-18.66	36.74	10.56	0.25356

	query	baseline mean	baseline std.dev	pool arrays support mean	pool arrays support std.dev	% change	baseline std.dev %	pool arrays support std.dev %	p-value
36	presto/tpcds:q37	460882.13	53898.15	378556.76	86357.21	-17.86	11.69	22.81	0.07575
51	presto/tpcds:q52	379932.70	45506.51	314977.90	73252.82	-17.10	11.98	23.26	0.09482
29	presto/tpcds:q30	1607650.49	364583.21	1351234.42	451802.83	-15.95	22.68	33.44	0.30471
5	presto/tpcds:q06	1612279.74	182205.24	1357820.95	80235.22	-15.78	11.30	5.91	0.01068
41	presto/tpcds:q42	291584.42	70168.34	248916.71	75382.99	-14.63	24.06	30.28	0.33411
83	presto/tpcds:q84	448185.11	66441.34	390832.71	20694.54	-12.80	14.82	5.29	0.07113
68	presto/tpcds:q69	883311.96	113752.73	770351.61	190688.93	-12.79	12.88	24.75	0.24111
88	presto/tpcds:q89	2836675.15	86612.00	2490740.12	230117.50	-12.20	3.05	9.24	0.00627
75	presto/tpcds:q76	1021402.27	188185.81	898254.07	87826.09	-12.06	18.42	9.78	0.17700
2	presto/tpcds:q03	731105.11	218374.45	654422.23	171421.31	-10.49	29.87	26.19	0.51401
20	presto/tpcds:q21	273923.47	32643.09	247206.69	39095.77	-9.75	11.92	15.82	0.22779
82	presto/tpcds:q83	182096.05	9963.95	164474.13	25559.82	-9.68	5.47	15.54	0.14669
48	presto/tpcds:q49	21969059.87	223249.13	19968310.51	2922952.83	-9.11	1.02	14.64	0.12551
86	presto/tpcds:q87	22743208.89	1649114.85	20688222.28	1151155.10	-9.04	7.25	5.56	0.03129
53	presto/tpcds:q54	1913281.42	187646.85	1749009.25	126330.74	-8.59	9.81	7.22	0.10563
30	presto/tpcds:q31	6527509.00	706234.28	5974580.89	733551.13	-8.47	10.82	12.28	0.21302
45	presto/tpcds:q46	2018919.38	109086.48	1851851.65	195490.50	-8.28	5.40	10.56	0.09749
37	presto/tpcds:q38	22248524.78	1654720.92	20566694.50	1122163.25	-7.56	7.44	5.46	0.06633
78	presto/tpcds:q79	3251964.44	129596.82	3029135.10	97503.57	-6.85	3.99	3.22	0.00718

	query	baseline mean	baseline std.dev	pool arrays support mean	pool arrays support std.dev	% change	baseline std.dev %	pool arrays support std.dev %	p-value
73	presto/tpcds:q74	29410940.35	1736935.07	27869825.52	2241649.68	-5.24	5.91	8.04	0.21269
98	presto/tpcds:q99	2229824.38	102744.79	2117957.76	81556.60	-5.02	4.61	3.85	0.06325
69	presto/tpcds:q70	3941065.09	237280.47	3774702.43	444213.54	-4.22	6.02	11.77	0.43725
97	presto/tpcds:q98	499340.65	186429.54	479330.63	169850.86	-4.01	37.34	35.44	0.84980
0	presto/tpcds:q01	8449171.11	919489.66	8131400.80	604858.01	-3.76	10.88	7.44	0.49557
50	presto/tpcds:q51	11733334.18	270985.00	11359589.26	495450.31	-3.19	2.31	4.36	0.13605
85	presto/tpcds:q86	1280053.20	51580.86	1240819.79	60710.79	-3.06	4.03	4.89	0.25545
80	presto/tpcds:q81	6247858.51	861111.41	6064101.35	829995.74	-2.94	13.78	13.69	0.71452
81	presto/tpcds:q82	1071726.00	77559.82	1040776.72	96776.30	-2.89	7.24	9.30	0.55466
61	presto/tpcds:q62	1571250.68	42296.86	1529441.04	69574.27	-2.66	2.69	4.55	0.23705
35	presto/tpcds:q36	4153987.10	184079.11	4044587.73	263624.06	-2.63	4.43	6.52	0.42406
6	presto/tpcds:q07	4331781.01	485464.59	4233127.89	599027.59	-2.28	11.21	14.15	0.76041
52	presto/tpcds:q53	1713671.71	1060613.15	1680251.96	375621.23	-1.95	61.89	22.36	0.94344
3	presto/tpcds:q04	80444150.98	4331689.53	79224837.21	3519525.24	-1.52	5.38	4.44	0.60426
23	presto/tpcds:q24	21804591.23	546408.48	21511546.69	518104.47	-1.34	2.51	2.41	0.36292
49	presto/tpcds:q50	4920786.58	171642.65	4863521.07	210507.31	-1.16	3.49	4.33	0.61678
63	presto/tpcds:q64	72411402.57	5358449.49	71680287.91	2342846.45	-1.01	7.40	3.27	0.76572
74	presto/tpcds:q75	27660454.39	495147.18	27411500.87	576705.16	-0.90	1.79	2.10	0.44105
76	presto/tpcds:q77	560113.36	37857.74	555342.17	51794.42	-0.85	6.76	9.33	0.85909

	query	baseline mean	baseline std.dev	poo rle arrays support mean	poo rle arrays support std.dev	% change	baseline std.dev %	poo rle arrays support std.dev %	p-value
72	presto/tpcds:q73	1226450.36	11721.08	1217008.75	16467.20	-0.77	0.96	1.35	0.27919
71	presto/tpcds:q72	56126931.48	2366379.25	55805463.87	3316077.37	-0.57	4.22	5.94	0.85060
38	presto/tpcds:q39	1141395.59	18415.21	1135359.00	19016.83	-0.53	1.61	1.67	0.58874
17	presto/tpcds:q18	3586619.53	365530.31	3568690.79	471446.84	-0.50	10.19	13.21	0.94277
57	presto/tpcds:q58	820800.95	43238.42	816934.70	28000.99	-0.47	5.27	3.43	0.85781
84	presto/tpcds:q85	12875312.33	177602.06	12828516.60	176835.83	-0.36	1.38	1.38	0.65719
16	presto/tpcds:q17	14237863.21	361311.48	14188461.12	372360.68	-0.35	2.54	2.62	0.82029
21	presto/tpcds:q22	993040.28	37051.58	989685.94	45455.43	-0.34	3.73	4.59	0.89136
33	presto/tpcds:q34	1489689.14	81470.21	1484871.43	66035.23	-0.32	5.47	4.45	0.91263
10	presto/tpcds:q11	70539441.62	255318.17	70323058.77	468523.59	-0.31	0.36	0.67	0.34397
92	presto/tpcds:q93	21074404.25	181707.02	21021373.37	80251.20	-0.25	0.86	0.38	0.52790
66	presto/tpcds:q67	84957109.30	190154.55	84779401.24	194619.72	-0.21	0.22	0.23	0.14073
79	presto/tpcds:q80	27600514.99	1601170.59	27558752.59	2529327.58	-0.15	5.80	9.18	0.97341
94	presto/tpcds:q95	76573149.73	107649.16	76498081.44	294347.18	-0.10	0.14	0.38	0.57041
27	presto/tpcds:q28	418516.05	7290.53	418286.50	3733.58	-0.05	1.74	0.89	0.94662
22	presto/tpcds:q23	61432470.00	333533.33	61431384.82	374629.04	-0.00	0.54	0.61	0.99588
89	presto/tpcds:q90	463385.36	88773.50	463509.38	63555.94	0.03	19.16	13.71	0.99783
58	presto/tpcds:q59	3668174.30	34156.45	3671832.85	46919.23	0.10	0.93	1.28	0.88035
96	presto/tpcds:q97	48802229.07	1655794.53	48864136.57	1370858.76	0.13	3.39	2.81	0.94515

	query	baseline mean	baseline std.dev	poo rle arrays support mean	poo rle arrays support std.dev	% change	baseline std.dev %	poo rle arrays support std.dev %	p-value
43	presto/tpcds:q44	475723.39	728.63	477021.40	1565.87	0.27	0.15	0.33	0.09545
46	presto/tpcds:q47	8923048.66	183137.31	8957631.34	113921.85	0.39	2.05	1.27	0.70274
25	presto/tpcds:q26	2341524.65	162619.86	2354792.02	279636.92	0.57	6.95	11.88	0.92196
15	presto/tpcds:q16	19129644.01	179948.56	19243562.73	178028.70	0.60	0.94	0.93	0.29613
12	presto/tpcds:q13	9167543.15	347764.95	9251528.08	243796.08	0.92	3.79	2.64	0.63855
1	presto/tpcds:q02	2669632.50	77736.02	2697067.02	97136.58	1.03	2.91	3.60	0.60092
56	presto/tpcds:q57	7320087.44	128457.17	7402031.74	132008.96	1.12	1.75	1.78	0.30140
93	presto/tpcds:q94	9272589.86	229979.02	9381500.23	223086.95	1.17	2.48	2.38	0.42450
77	presto/tpcds:q78	106598399.06	2962802.62	107864402.00	3376377.56	1.19	2.78	3.13	0.50568
26	presto/tpcds:q27	4693167.44	210410.03	4763364.18	217048.92	1.50	4.48	4.56	0.58204
7	presto/tpcds:q08	738290.32	45410.11	750422.97	46938.62	1.64	6.15	6.25	0.65880
64	presto/tpcds:q65	19670249.42	523000.98	19997418.86	238476.14	1.66	2.66	1.19	0.19346
55	presto/tpcds:q56	490298.36	85509.95	498478.67	68788.47	1.67	17.44	13.80	0.85877
39	presto/tpcds:q40	10518925.49	966070.02	10714105.27	76477.17	1.86	9.18	0.71	0.63243
24	presto/tpcds:q25	10375632.62	224326.33	10648379.07	284415.61	2.63	2.16	2.67	0.09492
34	presto/tpcds:q35	4126572.99	437024.50	4251299.21	569655.06	3.02	10.59	13.40	0.67947
42	presto/tpcds:q43	1699515.90	76926.36	1753854.98	117480.35	3.20	4.53	6.70	0.36555
13	presto/tpcds:q14	6052122.65	283091.55	6256819.24	315352.18	3.38	4.68	5.04	0.26411
32	presto/tpcds:q33	1524518.96	116673.70	1576478.81	92294.54	3.41	7.65	5.85	0.41228





```
25%      -5
50%      -0
75%       2
max       35
Name: % change, dtype: float64
```