

Benchmark details

```
[('dec-serde-baseline-oss-393-S-508d5e2e1b-hive_sf1000_orc_part-s1178',  
  'baseline',  
  'r'),  
 ('dec-serde-oss-393-S-87aafb6f91-hive_sf1000_orc_part-s1185',  
  'dec serde opt',  
  'g')]
```

Overall Times

	label	TPCH wall time	TPC-DS wall time	TPCH CPU time	TPC-DS CPU time	TPCH Network	TPC-DS Network	TPCH peak mem	TPC-DS peak mem	TPCH physical input	TPC-DS physical input	TPCH wall time % change	TPC-DS wall time % change	TPCH CPU time % change	TPC-DS CPU time % change	TPCH Network % change	TPC-DS Network % change	TPCH peak mem % change	TPC-DS peak mem % change	TPCH physical input % change	TPC-DS physical input % change
0	baseline	582	973	63,240	104,589	2.070 PiB	1.713 PiB	1.144 TiB	0.939 TiB	833.214 GiB	1.011 TiB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	dec serde opt	550	990	61,519	104,599	1.830 PiB	1.644 PiB	1.145 TiB	0.935 TiB	833.211 GiB	1.009 TiB	-5.45	1.73	-2.72	0.01	-11.60	-4.06	0.06	-0.48	-0.00	-0.20

FAILED QUERIES

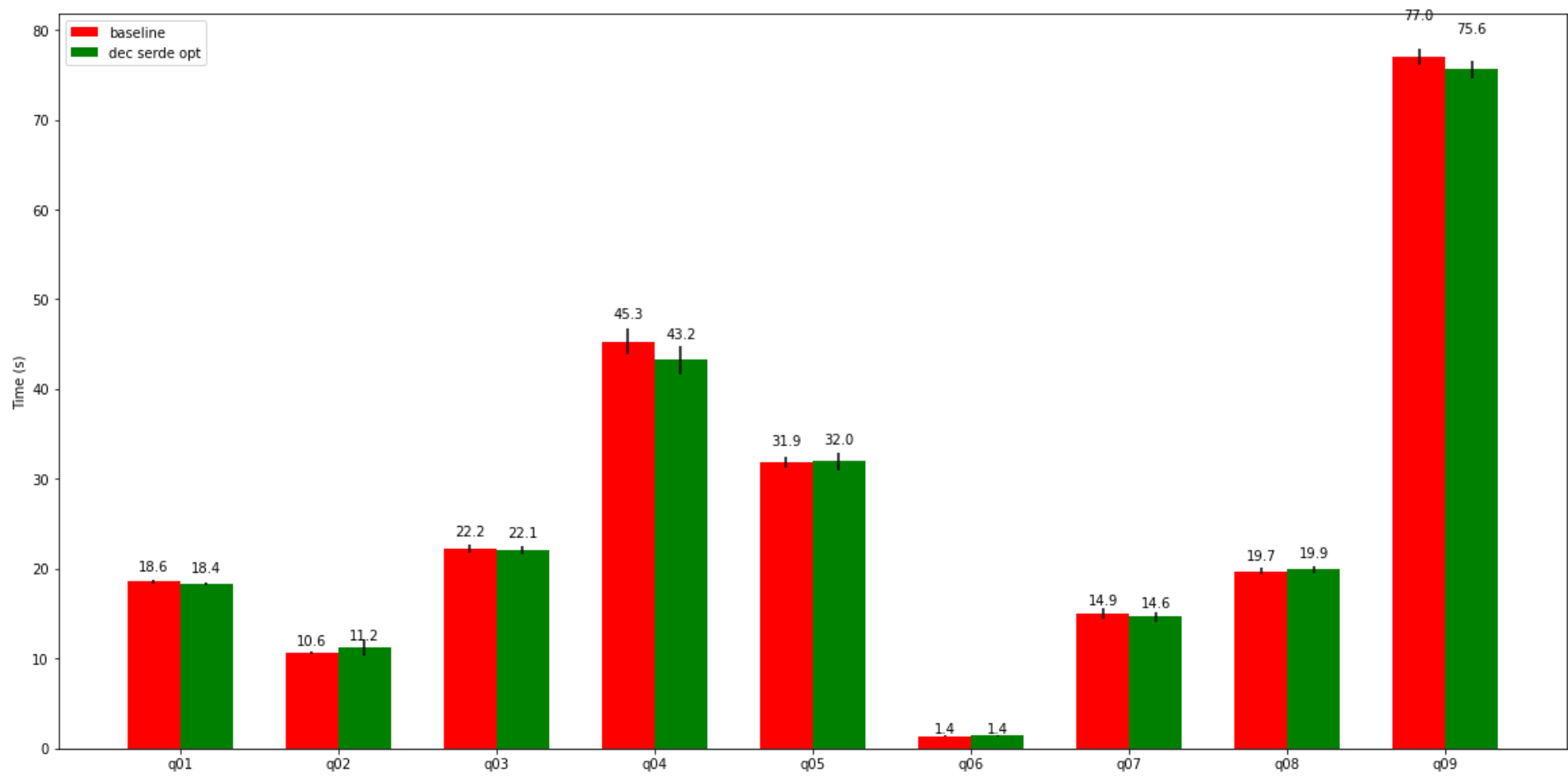
baseline

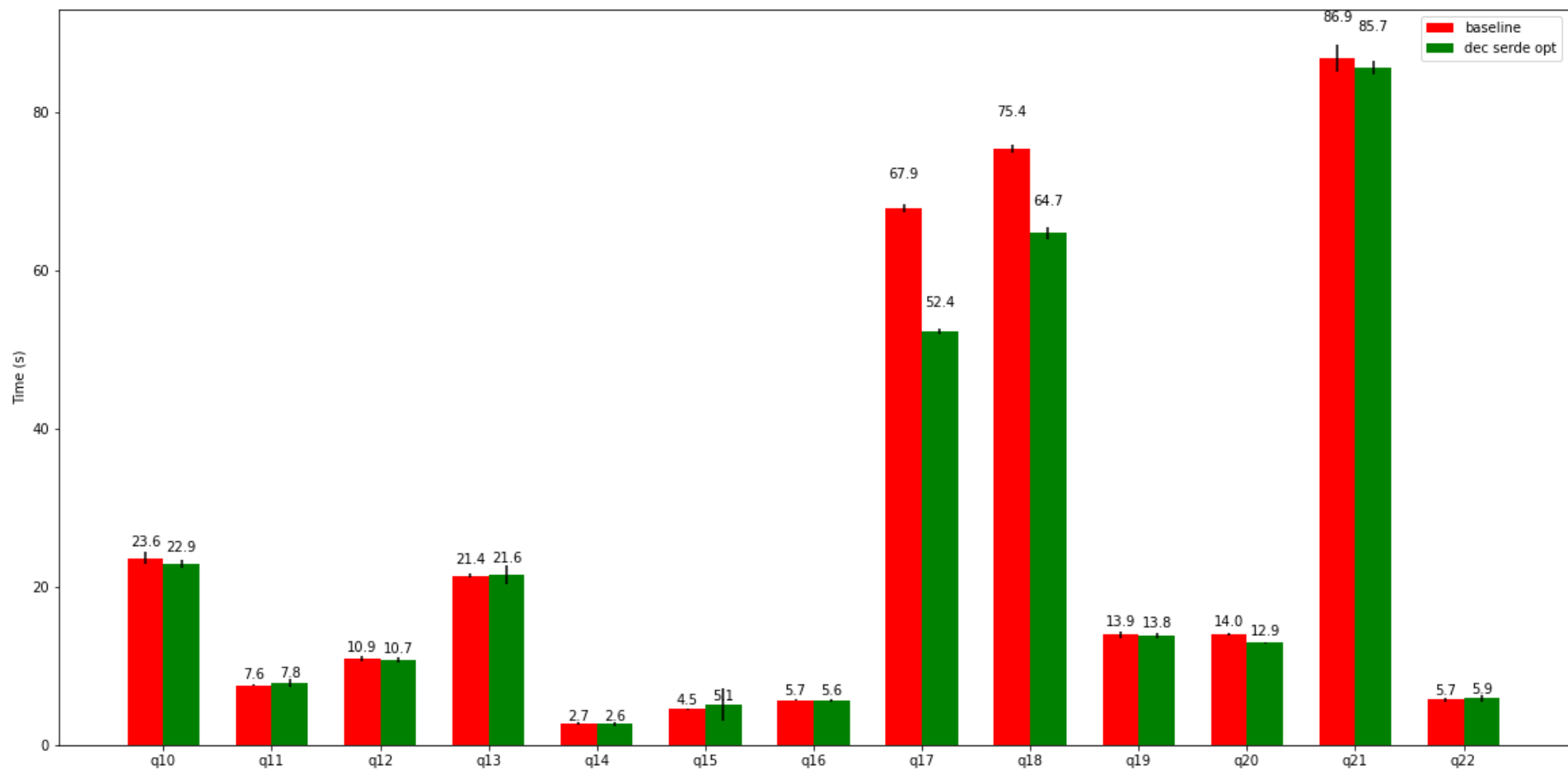
benchmark	query	mean_duration	std_dev
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dec serde opt

benchmark	query	mean_duration	std_dev
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TPC-H Comparison (DURATION)





	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
16	presto/tpch: q17	67.86	0.54	52.36	0.32	-22.84	-15.50	0.80	0.62	0.00000
17	presto/tpch: q18	75.41	0.49	64.72	0.77	-14.17	-10.69	0.66	1.19	0.00000
3	presto/tpch: q04	45.33	1.41	43.23	1.63	-4.64	-2.10	3.10	3.78	0.03807
8	presto/tpch: q09	76.97	0.92	75.58	0.92	-1.81	-1.39	1.20	1.21	0.02566
20	presto/tpch: q21	86.88	1.69	85.71	0.89	-1.34	-1.16	1.94	1.04	0.16686
19	presto/tpch: q20	14.04	0.14	12.88	0.07	-8.21	-1.15	0.97	0.55	0.00000
9	presto/tpch: q10	23.61	0.77	22.88	0.58	-3.10	-0.73	3.25	2.52	0.09145
6	presto/tpch: q07	14.95	0.59	14.64	0.56	-2.06	-0.31	3.98	3.85	0.37848
0	presto/tpch: q01	18.60	0.21	18.36	0.17	-1.26	-0.23	1.11	0.93	0.05749
11	presto/tpch: q12	10.91	0.34	10.74	0.36	-1.53	-0.17	3.13	3.39	0.43112
2	presto/tpch: q03	22.25	0.41	22.10	0.43	-0.66	-0.15	1.86	1.97	0.56091
18	presto/tpch: q19	13.95	0.41	13.82	0.32	-0.90	-0.12	2.93	2.31	0.56847

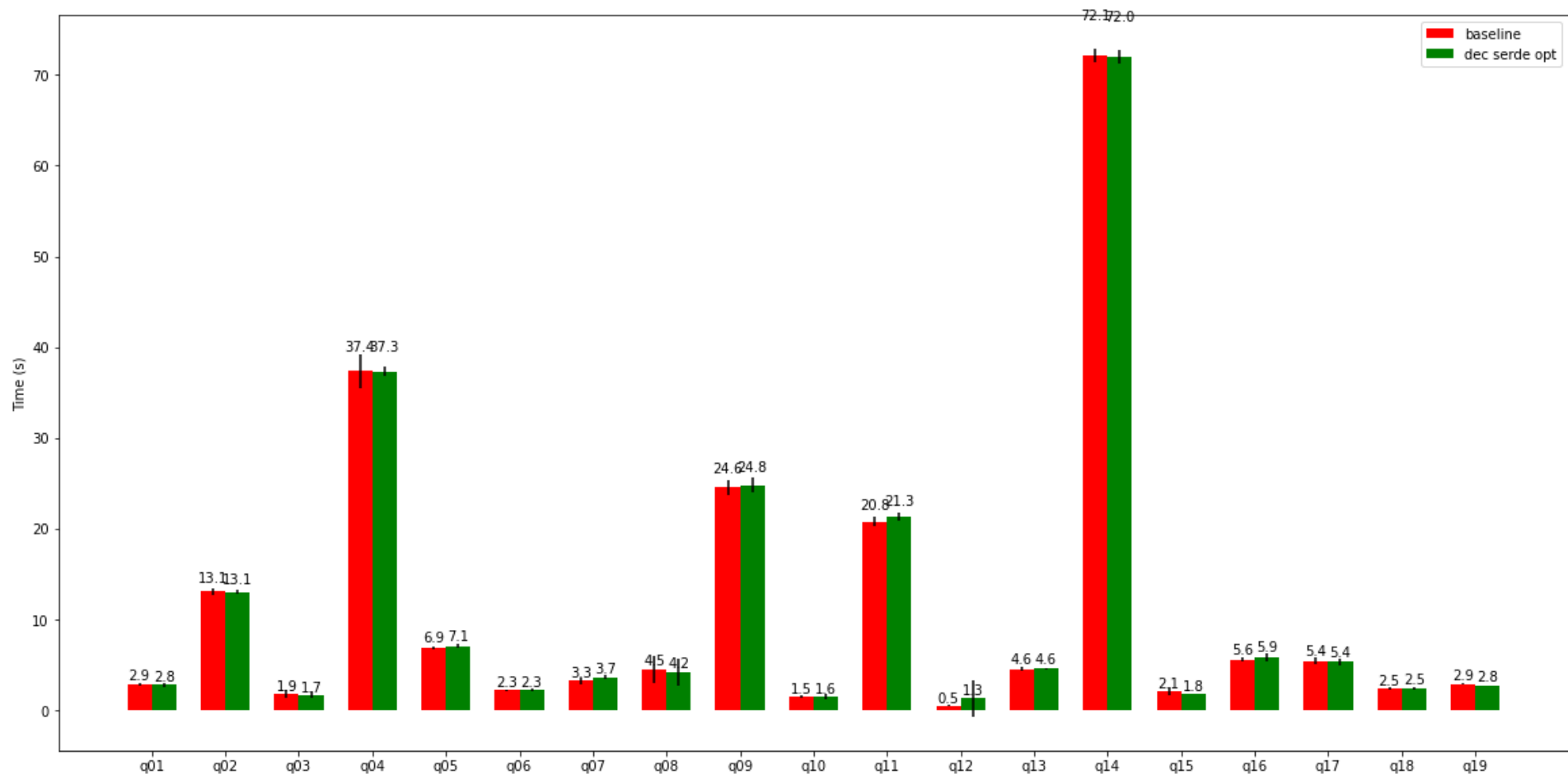
	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
15	presto/tpch: q16	5.68	0.06	5.59	0.11	-1.58	-0.09	1.09	1.98	0.11326
13	presto/tpch: q14	2.65	0.20	2.63	0.19	-1.09	-0.03	7.71	7.38	0.80715
5	presto/tpch: q06	1.36	0.09	1.40	0.10	2.86	0.04	6.45	7.22	0.49260
4	presto/tpch: q05	31.88	0.65	31.95	1.04	0.25	0.08	2.04	3.25	0.87912
7	presto/tpch: q08	19.74	0.35	19.92	0.35	0.93	0.18	1.79	1.74	0.38212
12	presto/tpch: q13	21.39	0.23	21.58	1.19	0.90	0.19	1.08	5.52	0.70597
21	presto/tpch: q22	5.71	0.26	5.91	0.39	3.50	0.20	4.48	6.65	0.32135
10	presto/tpch: q11	7.57	0.04	7.80	0.53	3.15	0.24	0.58	6.76	0.29601
14	presto/tpch: q15	4.54	0.12	5.06	2.04	11.34	0.52	2.75	40.28	0.55020
1	presto/tpch: q02	10.61	0.15	11.25	0.90	6.06	0.64	1.39	8.04	0.11659

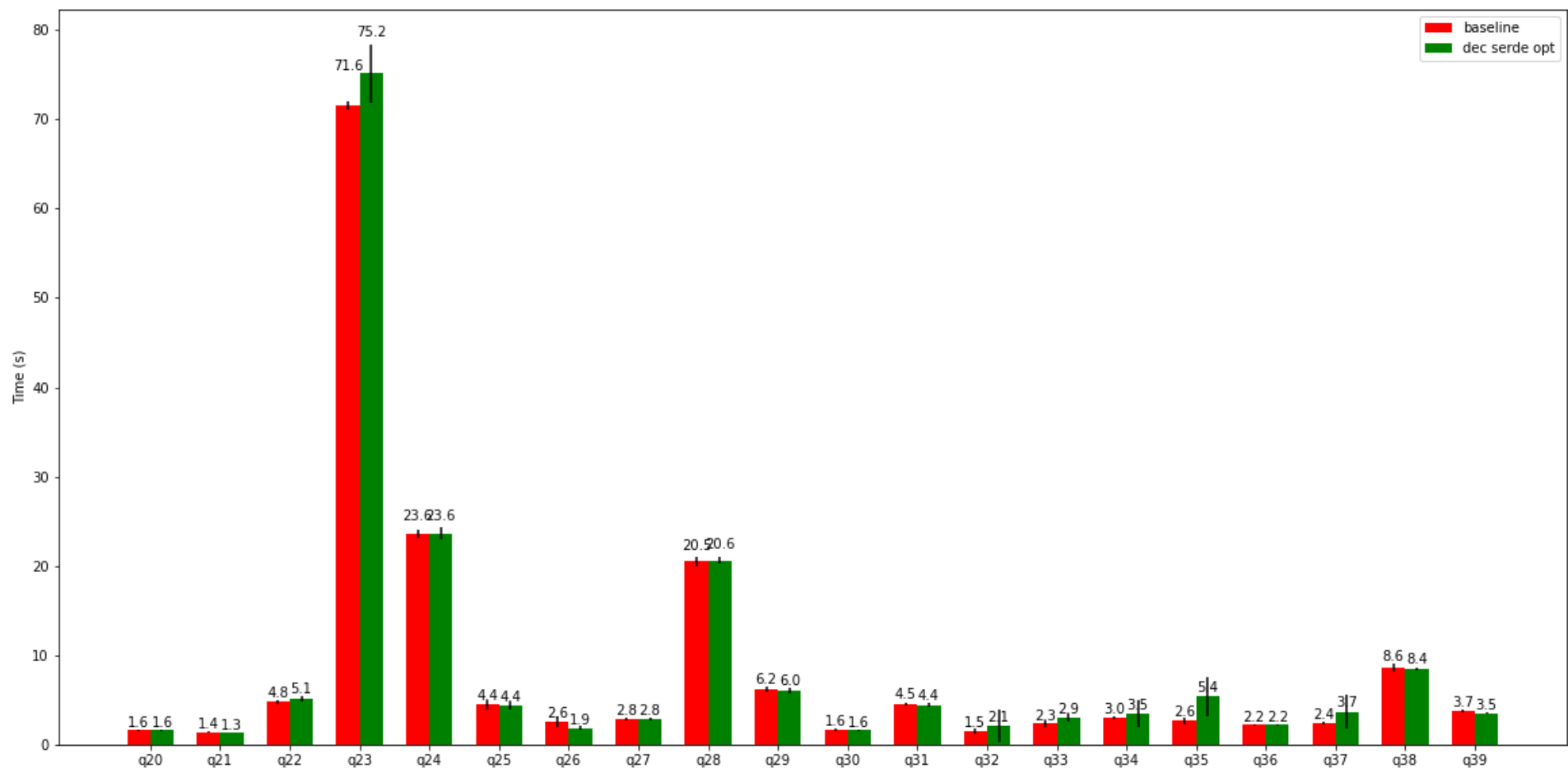
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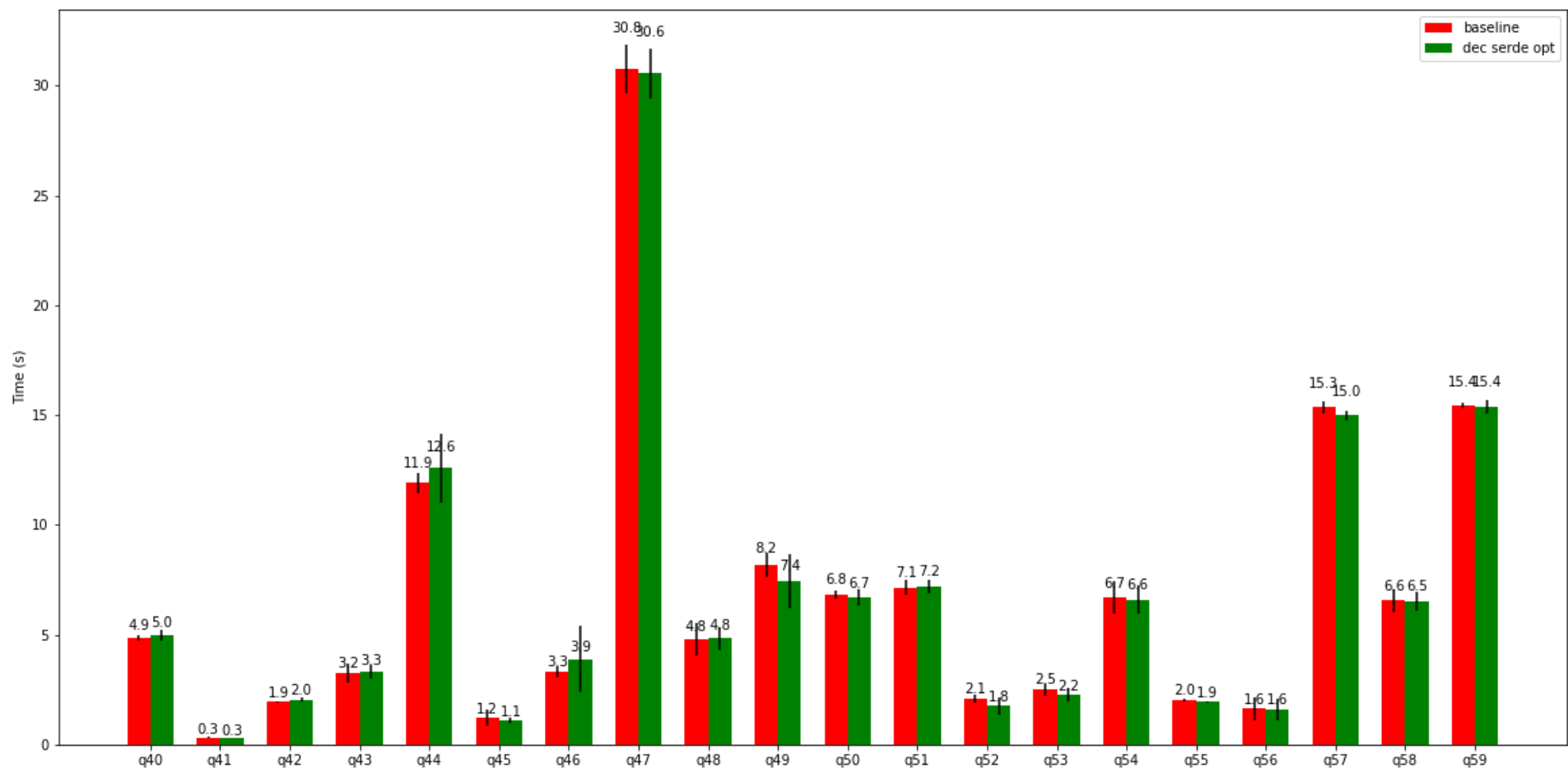
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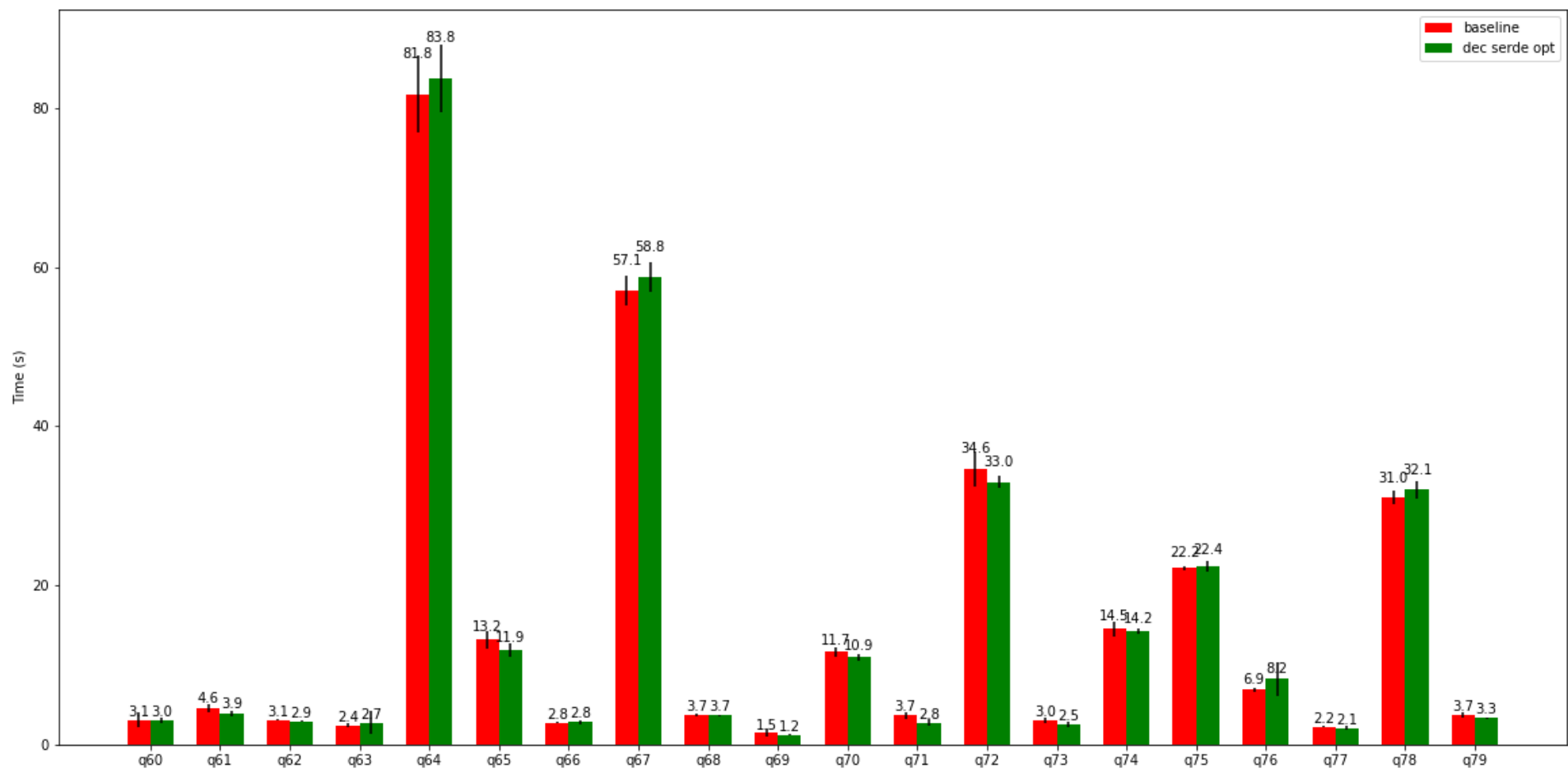
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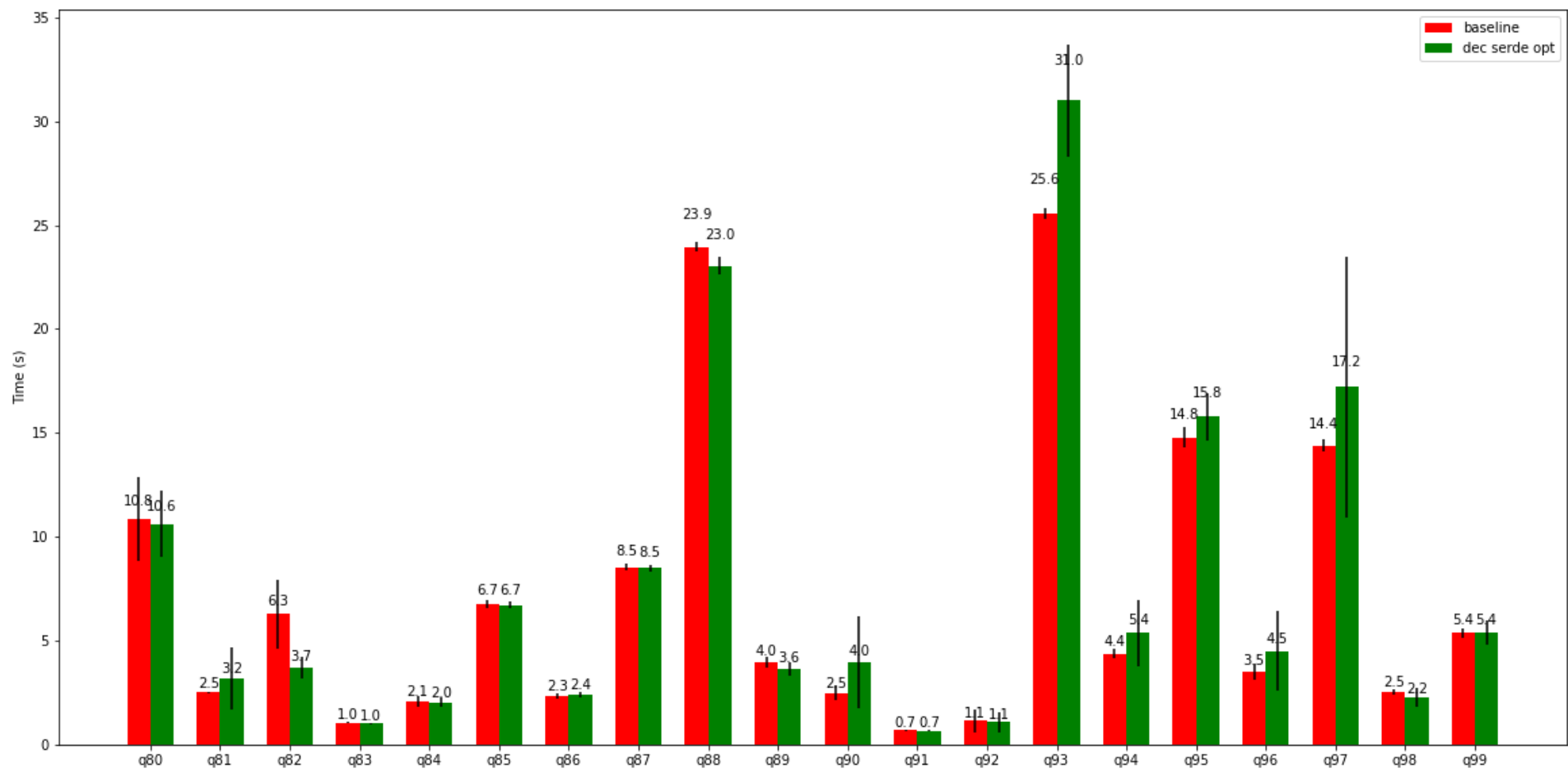
TPC-DS Comparison (DURATION)

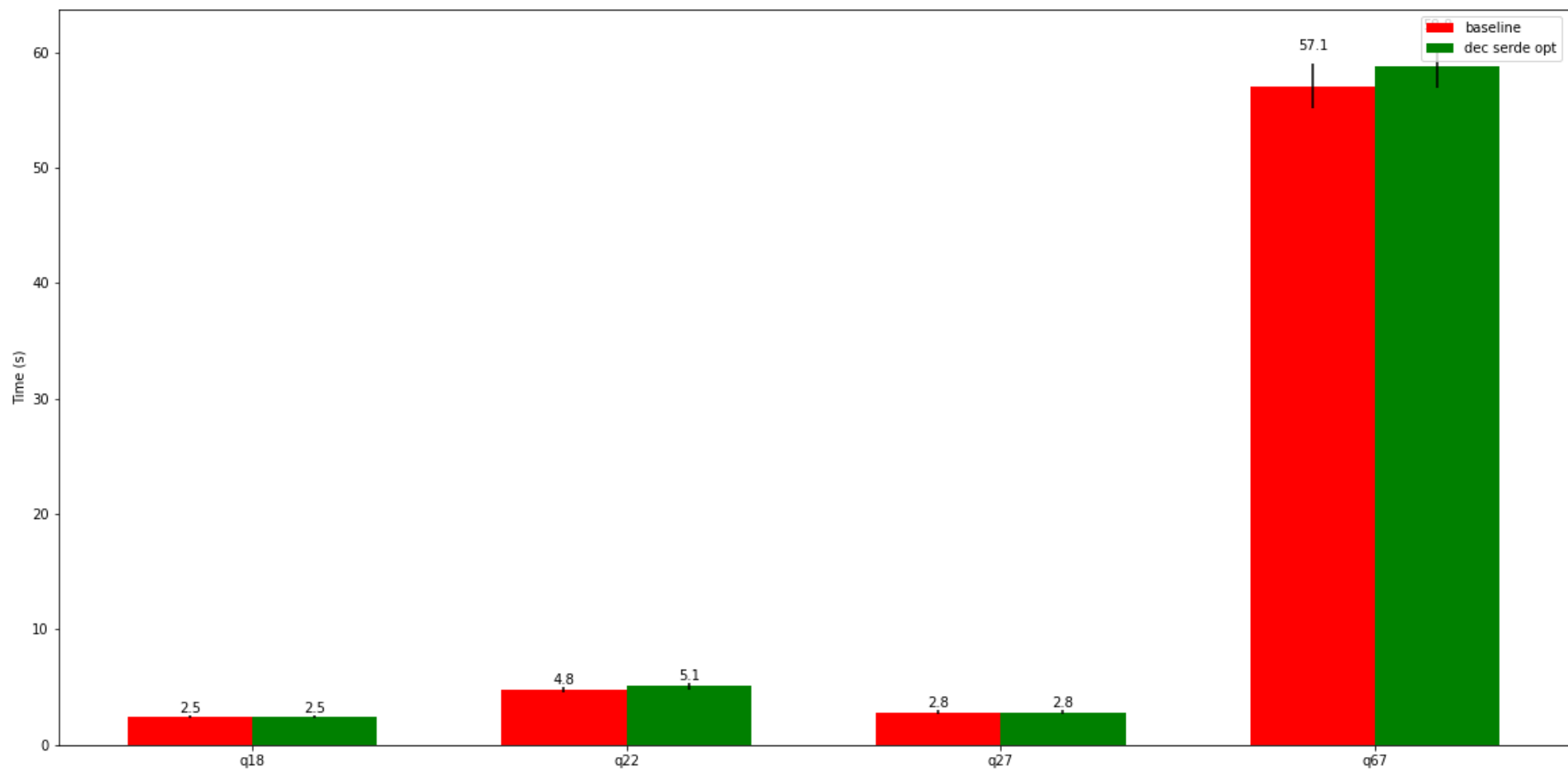












	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
81	presto/tpcds: q82	6.27	1.63	3.72	0.52	-40.69	-2.55	26.06	13.97	0.00450
71	presto/tpcds: q72	34.65	2.22	32.96	0.75	-4.87	-1.69	6.40	2.27	0.10783
64	presto/tpcds: q65	13.21	1.09	11.89	0.85	-9.96	-1.31	8.29	7.14	0.04239
70	presto/tpcds: q71	3.66	0.47	2.76	0.41	-24.56	-0.90	12.90	14.68	0.00538
87	presto/tpcds: q88	23.94	0.23	23.05	0.42	-3.75	-0.90	0.94	1.81	0.00093
48	presto/tpcds: q49	8.18	0.56	7.43	1.23	-9.21	-0.75	6.81	16.49	0.20004
69	presto/tpcds: q70	11.68	0.61	10.94	0.43	-6.35	-0.74	5.18	3.91	0.03418
25	presto/tpcds: q26	2.59	0.61	1.86	0.20	-28.15	-0.73	23.63	10.93	0.01980
60	presto/tpcds: q61	4.60	0.52	3.94	0.33	-14.39	-0.66	11.35	8.35	0.02519
72	presto/tpcds: q73	3.02	0.36	2.49	0.39	-17.50	-0.53	12.01	15.64	0.03530
78	presto/tpcds: q79	3.70	0.39	3.32	0.11	-10.24	-0.38	10.56	3.39	0.04558
56	presto/tpcds: q57	15.35	0.29	14.99	0.21	-2.33	-0.36	1.89	1.39	0.03361

	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
88	presto/tpcds: q89	3.96	0.26	3.63	0.32	-8.30	-0.33	6.49	8.79	0.07779
51	presto/tpcds: q52	2.08	0.18	1.75	0.40	-15.74	-0.33	8.42	22.64	0.09407
14	presto/tpcds: q15	2.14	0.49	1.82	0.01	-14.98	-0.32	22.86	0.66	0.13977
68	presto/tpcds: q69	1.49	0.54	1.18	0.07	-20.32	-0.30	36.11	5.78	0.20149
7	presto/tpcds: q08	4.53	1.43	4.24	1.46	-6.35	-0.29	31.48	34.49	0.73734
73	presto/tpcds: q74	14.51	0.86	14.23	0.35	-1.89	-0.27	5.92	2.46	0.48507
97	presto/tpcds: q98	2.51	0.13	2.24	0.45	-10.71	-0.27	5.22	20.10	0.19054
52	presto/tpcds: q53	2.48	0.29	2.24	0.31	-9.94	-0.25	11.56	13.77	0.18146
79	presto/tpcds: q80	10.85	2.03	10.61	1.61	-2.17	-0.24	18.74	15.14	0.82864
28	presto/tpcds: q29	6.23	0.32	6.00	0.26	-3.75	-0.23	5.07	4.36	0.19280
37	presto/tpcds: q38	8.62	0.45	8.40	0.13	-2.53	-0.22	5.24	1.59	0.28333
38	presto/tpcds: q39	3.70	0.16	3.50	0.03	-5.54	-0.21	4.29	0.97	0.01130
46	presto/tpcds: q47	30.76	1.11	30.56	1.13	-0.63	-0.19	3.59	3.69	0.77045
13	presto/tpcds: q14	72.12	0.76	71.96	0.69	-0.22	-0.16	1.05	0.96	0.71559
18	presto/tpcds: q19	2.93	0.04	2.78	0.02	-4.85	-0.14	1.49	0.82	0.00003
49	presto/tpcds: q50	6.83	0.19	6.69	0.38	-2.06	-0.14	2.83	5.68	0.43656
61	presto/tpcds: q62	3.07	0.08	2.93	0.10	-4.51	-0.14	2.68	3.29	0.02324
2	presto/tpcds: q03	1.86	0.39	1.73	0.37	-7.17	-0.13	20.88	21.65	0.55795
76	presto/tpcds: q77	2.21	0.06	2.08	0.18	-5.79	-0.13	2.68	8.87	0.13728
30	presto/tpcds: q31	4.52	0.11	4.42	0.28	-2.29	-0.10	2.36	6.23	0.41110
44	presto/tpcds: q45	1.20	0.37	1.10	0.12	-8.47	-0.10	30.63	10.53	0.53279
20	presto/tpcds: q21	1.39	0.06	1.30	0.02	-6.94	-0.10	4.00	1.60	0.00260
54	presto/tpcds: q55	2.03	0.07	1.94	0.04	-4.43	-0.09	3.36	1.94	0.01789
53	presto/tpcds: q54	6.69	0.74	6.60	0.63	-1.31	-0.09	11.03	9.51	0.82878
24	presto/tpcds: q25	4.44	0.46	4.35	0.42	-1.98	-0.09	10.43	9.76	0.73948
59	presto/tpcds: q60	3.10	0.92	3.01	0.31	-2.67	-0.08	29.80	10.22	0.83901
67	presto/tpcds: q68	3.74	0.12	3.66	0.08	-2.16	-0.08	3.29	2.17	0.20601
91	presto/tpcds: q92	1.13	0.58	1.06	0.48	-6.05	-0.07	50.92	45.26	0.82775
16	presto/tpcds: q17	5.43	0.37	5.37	0.38	-1.21	-0.07	6.75	7.04	0.76504
83	presto/tpcds: q84	2.09	0.25	2.03	0.25	-3.00	-0.06	12.06	12.42	0.67600
1	presto/tpcds: q02	13.14	0.36	13.09	0.19	-0.41	-0.05	2.75	1.47	0.75128
29	presto/tpcds: q30	1.64	0.11	1.58	0.03	-3.28	-0.05	6.90	1.94	0.28684
58	presto/tpcds: q59	15.42	0.11	15.38	0.29	-0.31	-0.05	0.68	1.87	0.71312
0	presto/tpcds: q01	2.89	0.13	2.84	0.26	-1.53	-0.04	4.34	9.00	0.71288

	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
82	presto/tpcds: q83	1.04	0.05	1.00	0.05	-3.63	-0.04	4.39	4.49	0.17951
35	presto/tpcds: q36	2.20	0.09	2.17	0.10	-1.55	-0.03	4.25	4.80	0.56330
86	presto/tpcds: q87	8.54	0.15	8.51	0.16	-0.39	-0.03	1.77	1.90	0.71896
55	presto/tpcds: q56	1.63	0.52	1.60	0.50	-1.60	-0.03	32.10	31.42	0.93177
57	presto/tpcds: q58	6.55	0.51	6.53	0.43	-0.31	-0.02	7.71	6.61	0.94268
84	presto/tpcds: q85	6.74	0.19	6.72	0.16	-0.26	-0.02	2.81	2.37	0.86446
90	presto/tpcds: q91	0.68	0.04	0.66	0.03	-2.44	-0.02	5.46	5.04	0.43606
3	presto/tpcds: q04	37.36	1.90	37.34	0.50	-0.04	-0.02	5.08	1.35	0.98431
26	presto/tpcds: q27	2.84	0.20	2.83	0.16	-0.48	-0.01	6.91	5.53	0.89771
40	presto/tpcds: q41	0.31	0.01	0.30	0.01	-3.87	-0.01	4.60	4.80	0.17681
98	presto/tpcds: q99	5.37	0.23	5.38	0.57	0.07	0.00	4.21	10.64	0.98915
17	presto/tpcds: q18	2.45	0.08	2.47	0.15	0.61	0.02	3.40	5.91	0.83105
23	presto/tpcds: q24	23.61	0.43	23.63	0.65	0.08	0.02	1.80	2.74	0.95080
19	presto/tpcds: q20	1.57	0.02	1.59	0.04	1.41	0.02	1.34	2.63	0.27275
5	presto/tpcds: q06	2.26	0.09	2.29	0.09	1.19	0.03	4.14	3.81	0.61865
12	presto/tpcds: q13	4.60	0.16	4.64	0.10	0.79	0.04	3.49	2.25	0.65348
50	presto/tpcds: q51	7.15	0.33	7.19	0.29	0.52	0.04	4.59	3.97	0.83689
47	presto/tpcds: q48	4.78	0.73	4.83	0.51	1.06	0.05	15.19	10.60	0.89179
65	presto/tpcds: q66	2.75	0.14	2.81	0.25	1.98	0.05	5.03	8.84	0.64882
85	presto/tpcds: q86	2.33	0.10	2.40	0.16	2.98	0.07	4.24	6.58	0.38296
9	presto/tpcds: q10	1.50	0.15	1.57	0.33	4.67	0.07	10.13	21.02	0.64655
42	presto/tpcds: q43	3.24	0.41	3.31	0.31	2.32	0.08	12.67	9.34	0.72766
27	presto/tpcds: q28	20.51	0.57	20.59	0.36	0.41	0.08	2.79	1.73	0.76557
41	presto/tpcds: q42	1.93	0.03	2.03	0.09	4.77	0.09	1.29	4.54	0.03934
39	presto/tpcds: q40	4.85	0.13	4.98	0.22	2.61	0.13	2.68	4.44	0.25479
8	presto/tpcds: q09	24.61	0.81	24.78	0.82	0.69	0.17	3.31	3.32	0.72733
4	presto/tpcds: q05	6.93	0.17	7.11	0.22	2.53	0.18	2.48	3.06	0.15234
74	presto/tpcds: q75	22.16	0.28	22.40	0.66	1.06	0.24	1.28	2.94	0.43916
21	presto/tpcds: q22	4.79	0.21	5.09	0.29	6.33	0.30	4.39	5.73	0.06566
15	presto/tpcds: q16	5.60	0.25	5.93	0.45	5.81	0.33	4.44	7.58	0.15173
62	presto/tpcds: q63	2.36	0.27	2.75	1.45	16.32	0.39	11.41	52.90	0.53720
6	presto/tpcds: q07	3.28	0.39	3.70	0.28	12.76	0.42	12.02	7.56	0.06002
33	presto/tpcds: q34	2.97	0.12	3.45	1.50	16.18	0.48	4.07	43.39	0.45134
10	presto/tpcds: q11	20.83	0.46	21.31	0.44	2.34	0.49	2.22	2.04	0.09026

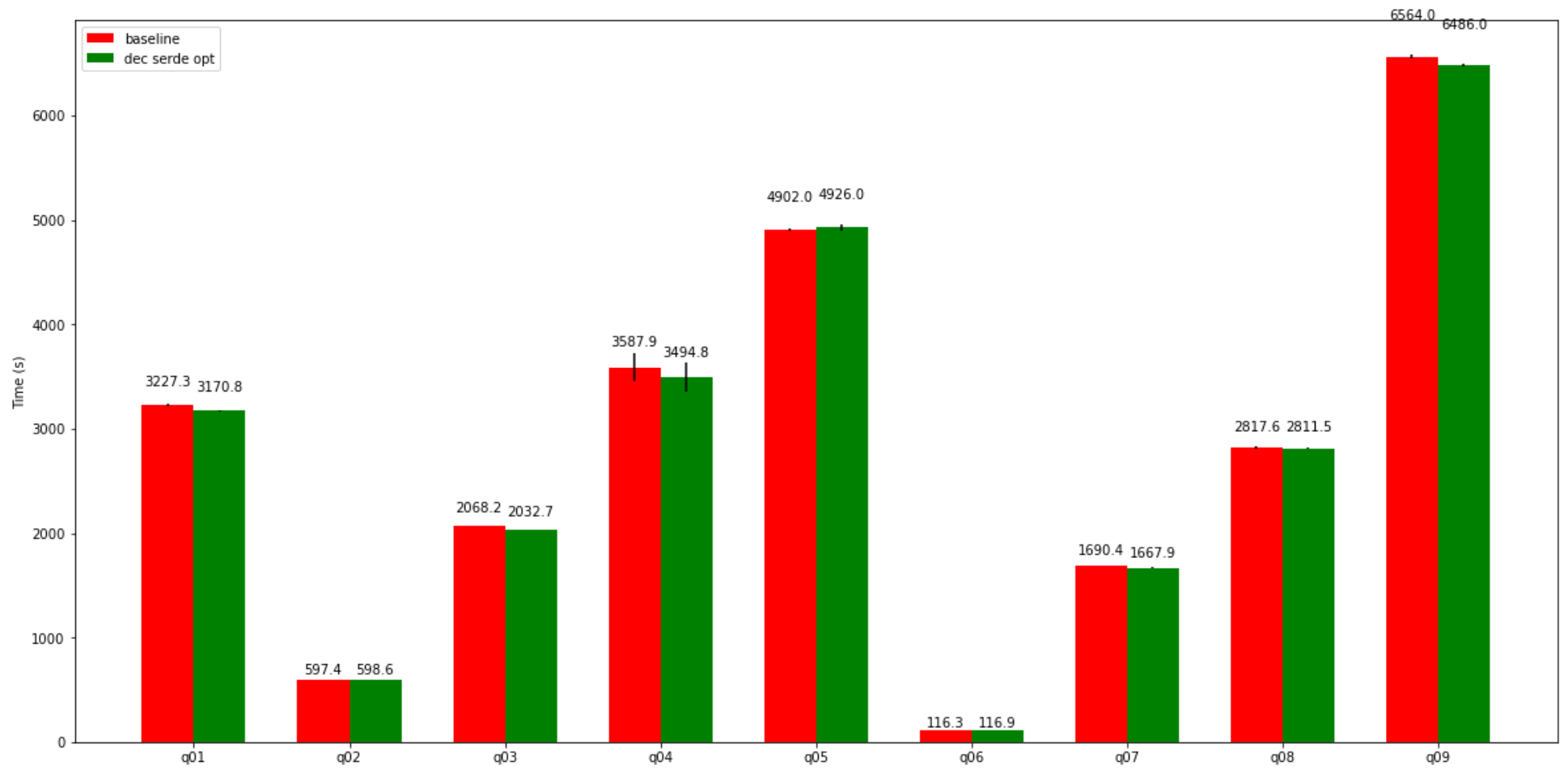
	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
31	presto/tpcds: q32	1.51	0.27	2.06	1.82	37.14	0.56	17.66	88.32	0.47445
32	presto/tpcds: q33	2.35	0.36	2.93	0.46	24.91	0.58	15.33	15.80	0.03478
45	presto/tpcds: q46	3.30	0.24	3.89	1.49	17.94	0.59	7.19	38.36	0.36014
80	presto/tpcds: q81	2.49	0.04	3.17	1.49	27.19	0.68	1.41	47.05	0.29190
43	presto/tpcds: q44	11.90	0.46	12.59	1.57	5.74	0.68	3.86	12.51	0.33132
11	presto/tpcds: q12	0.52	0.07	1.33	2.03	158.24	0.82	13.94	152.21	0.34763
95	presto/tpcds: q96	3.51	0.41	4.49	1.92	27.85	0.98	11.66	42.78	0.25044
93	presto/tpcds: q94	4.37	0.24	5.36	1.57	22.53	0.98	5.51	29.35	0.16029
94	presto/tpcds: q95	14.79	0.51	15.78	1.13	6.68	0.99	3.44	7.13	0.07849
77	presto/tpcds: q78	31.05	0.84	32.06	1.12	3.26	1.01	2.71	3.49	0.10650
36	presto/tpcds: q37	2.41	0.11	3.66	1.87	51.59	1.25	4.44	51.03	0.13394
75	presto/tpcds: q76	6.88	0.25	8.22	2.18	19.40	1.34	3.59	26.58	0.16758
89	presto/tpcds: q90	2.49	0.33	3.95	2.20	58.75	1.46	13.40	55.61	0.13810
66	presto/tpcds: q67	57.06	1.94	58.79	1.86	3.02	1.73	3.40	3.17	0.14731
63	presto/tpcds: q64	81.80	4.91	83.77	4.23	2.41	1.97	6.00	5.04	0.47305
34	presto/tpcds: q35	2.65	0.41	5.36	2.15	102.36	2.71	15.49	40.12	0.01261
96	presto/tpcds: q97	14.39	0.28	17.21	6.26	19.61	2.82	1.91	36.39	0.29602
22	presto/tpcds: q23	71.57	0.42	75.16	3.21	5.02	3.59	0.59	4.27	0.02173
92	presto/tpcds: q93	25.55	0.24	31.00	2.68	21.33	5.45	0.93	8.65	0.00057

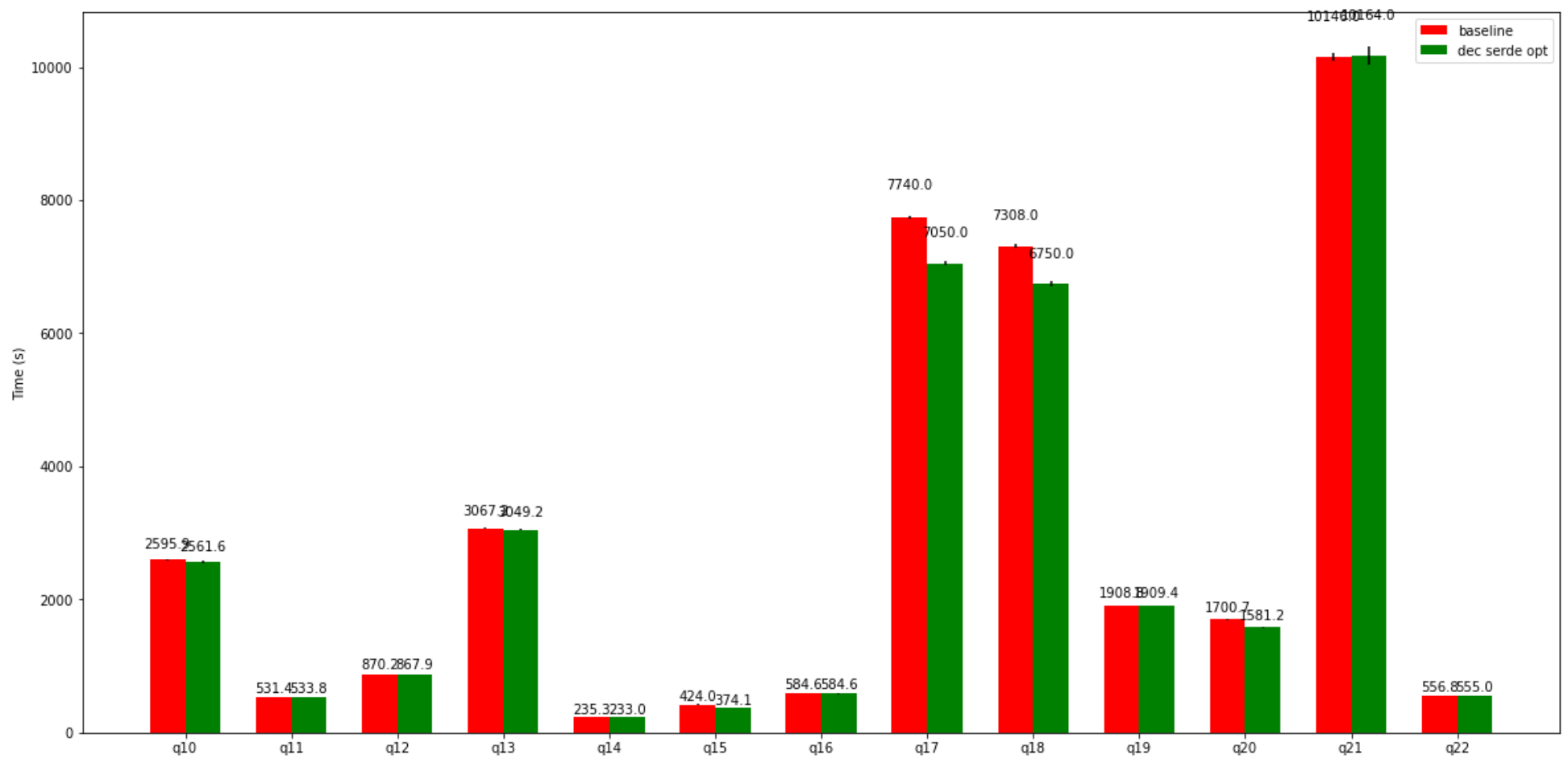
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```

TPC-H Comparison (CPU)





	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
14	presto/tpch: q15	424.00	1.68	374.10	1.55	-11.77	-49.90	0.40	0.42	0.00000
16	presto/tpch: q17	7740.00	22.77	7050.00	35.39	-8.91	-690.00	0.29	0.50	0.00000
17	presto/tpch: q18	7308.00	32.20	6750.00	37.76	-7.64	-558.00	0.44	0.56	0.00000
19	presto/tpch: q20	1700.70	5.71	1581.20	4.84	-7.03	-119.50	0.34	0.31	0.00000
3	presto/tpch: q04	3587.90	136.22	3494.80	142.47	-2.59	-93.10	3.80	4.08	0.27419
0	presto/tpch: q01	3227.30	9.31	3170.80	9.34	-1.75	-56.50	0.29	0.29	0.00000
2	presto/tpch: q03	2068.20	1.74	2032.70	4.73	-1.72	-35.50	0.08	0.23	0.00000
6	presto/tpch: q07	1690.40	3.75	1667.90	8.41	-1.33	-22.50	0.22	0.50	0.00013
9	presto/tpch: q10	2595.90	12.59	2561.60	23.36	-1.32	-34.30	0.48	0.91	0.01006
8	presto/tpch: q09	6564.00	18.59	6486.00	14.70	-1.19	-78.00	0.28	0.23	0.00001
13	presto/tpch: q14	235.30	2.13	233.00	2.39	-0.98	-2.30	0.90	1.03	0.10874
12	presto/tpch: q13	3067.20	7.91	3049.20	6.76	-0.59	-18.00	0.26	0.22	0.00172

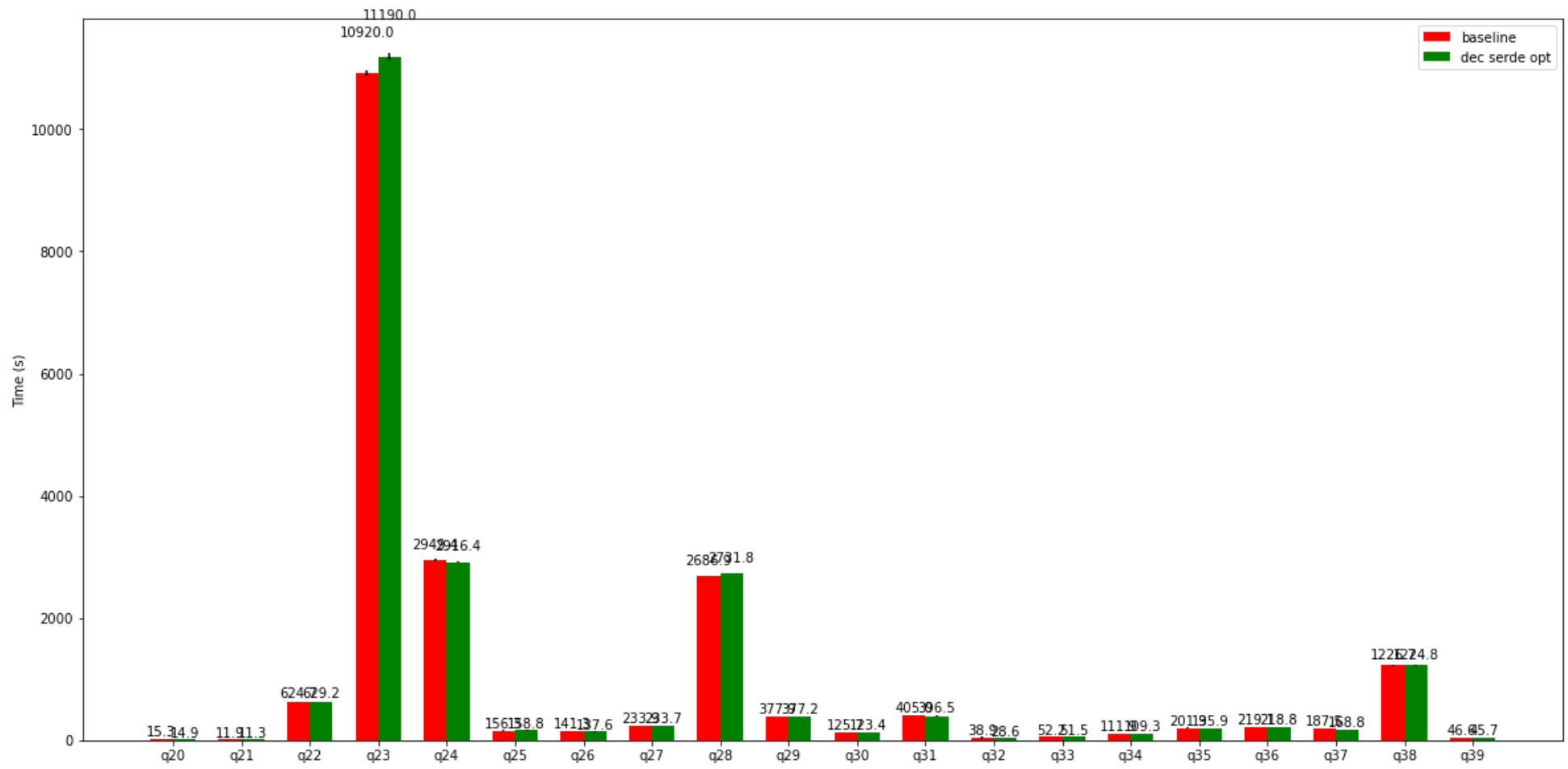
	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
21	presto/tpch: q22	556.80	2.52	555.00	1.90	-0.32	-1.80	0.45	0.34	0.19213
11	presto/tpch: q12	870.20	1.81	867.90	2.10	-0.26	-2.30	0.21	0.24	0.06965
7	presto/tpch: q08	2817.60	13.86	2811.50	9.69	-0.22	-6.10	0.49	0.34	0.39761
15	presto/tpch: q16	584.60	0.73	584.60	2.48	0.00	0.00	0.12	0.42	1.00000
18	presto/tpch: q19	1908.80	2.67	1909.40	6.96	0.03	0.60	0.14	0.36	0.84774
20	presto/tpch: q21	10146.00	57.67	10164.00	143.40	0.18	18.00	0.57	1.41	0.78126
1	presto/tpch: q02	597.40	1.92	598.60	2.36	0.20	1.20	0.32	0.39	0.35695
10	presto/tpch: q11	531.40	2.62	533.80	1.30	0.45	2.40	0.49	0.24	0.07203
4	presto/tpch: q05	4902.00	14.70	4926.00	27.10	0.49	24.00	0.30	0.55	0.08564
5	presto/tpch: q06	116.30	0.59	116.90	0.24	0.52	0.60	0.51	0.21	0.04419

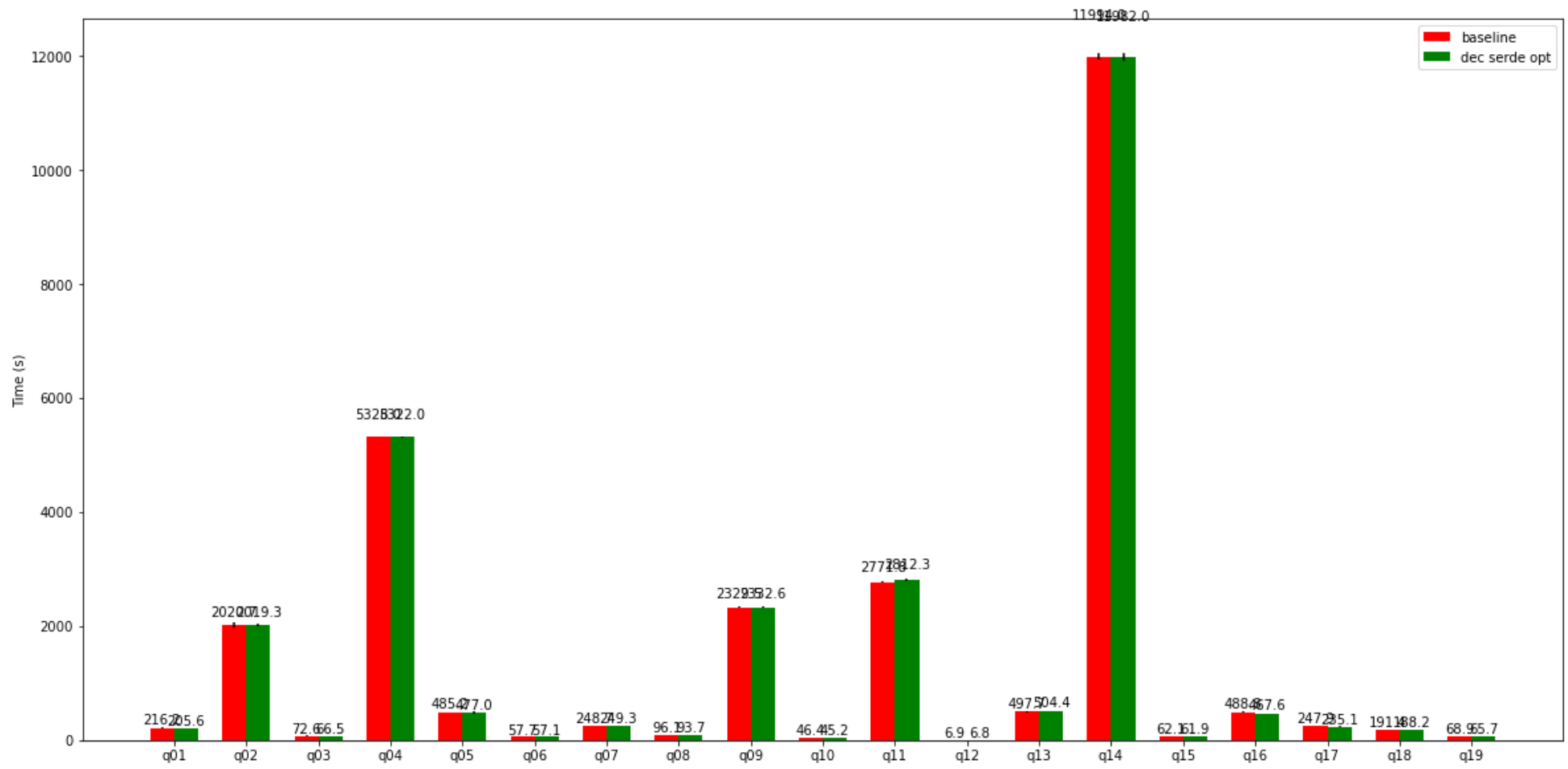
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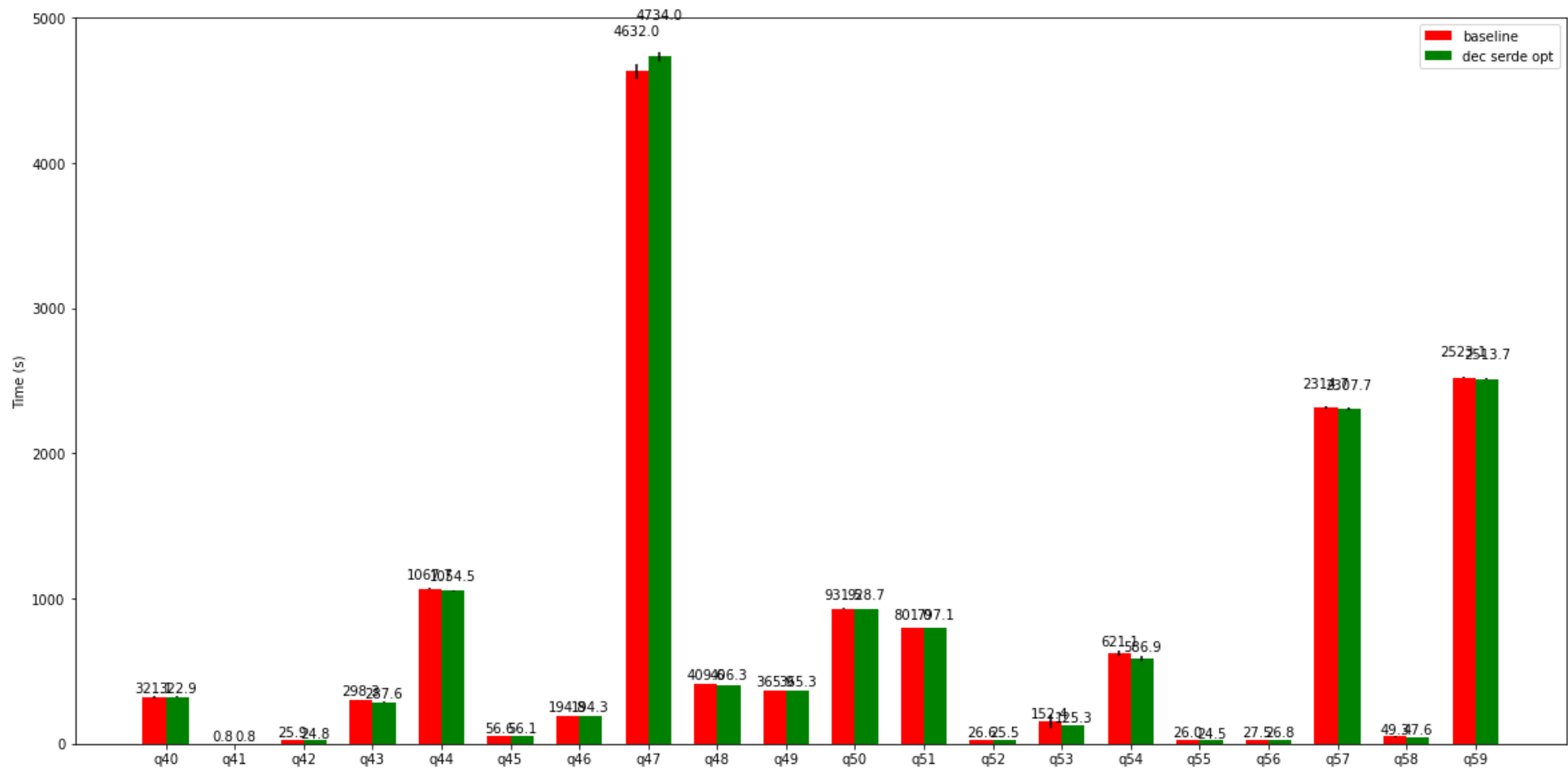
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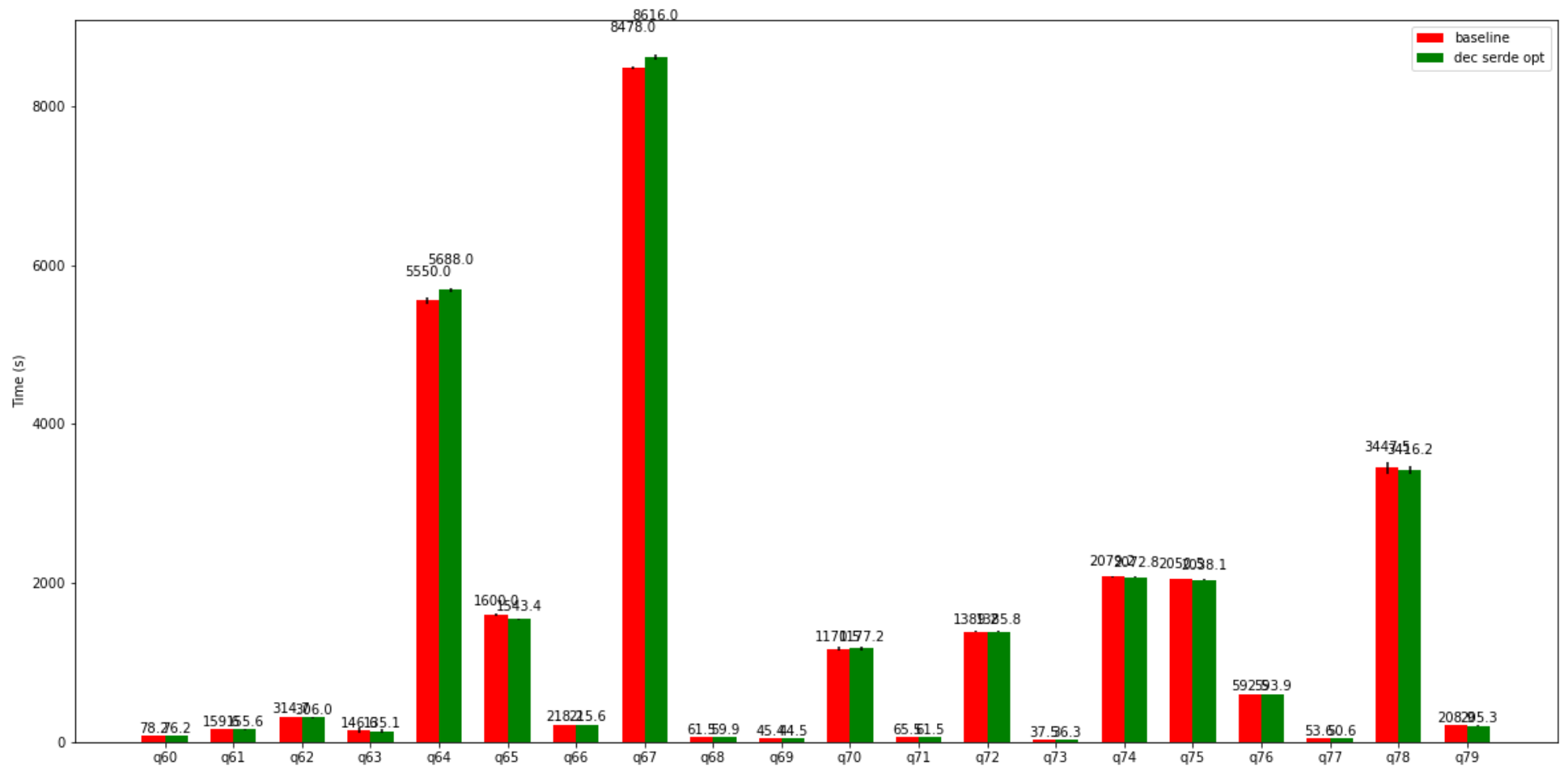
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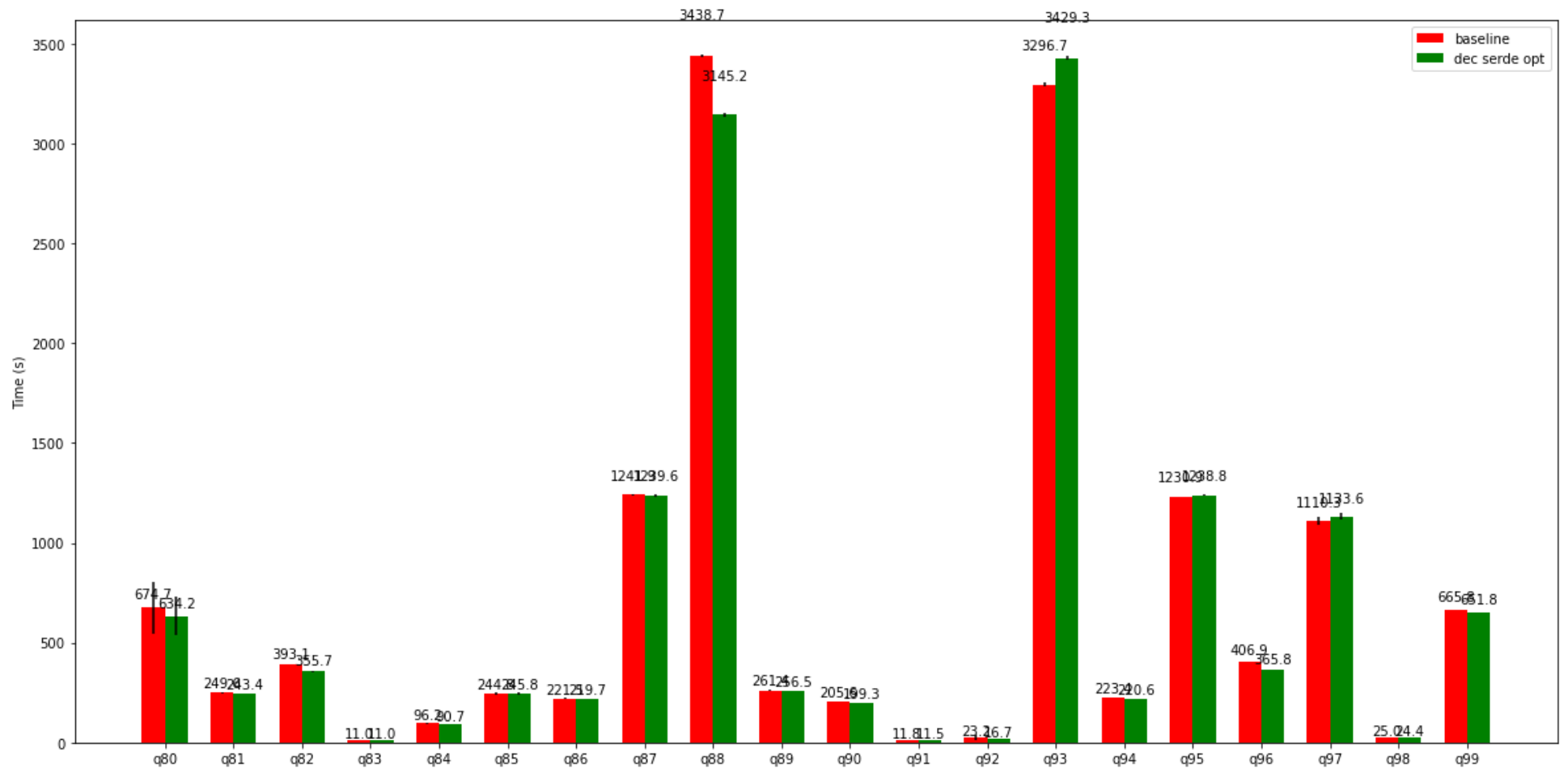
TPC-DS Comparison (CPU)

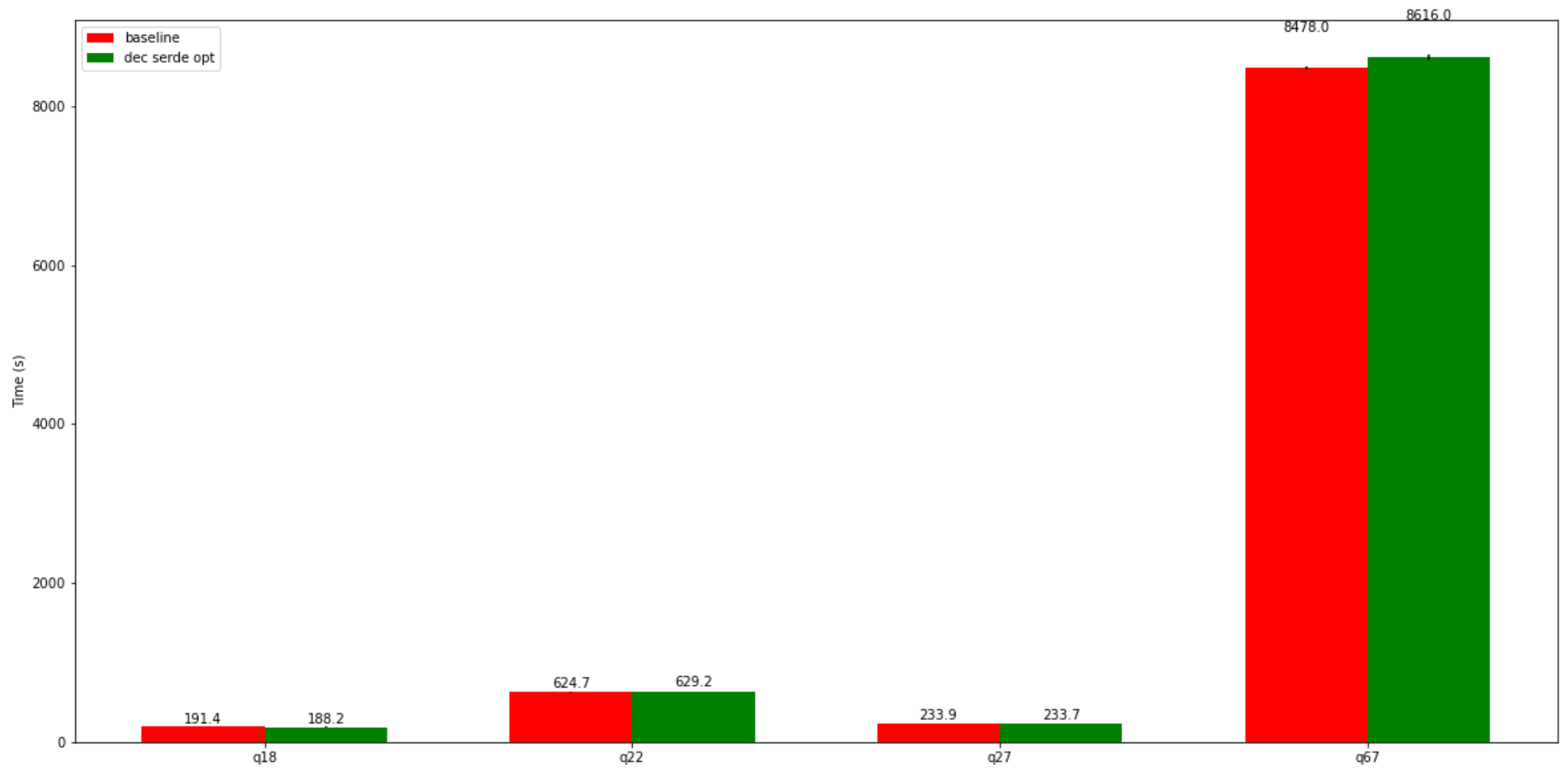












	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
91	presto/tpcds: q92	23.18	12.81	16.71	0.16	-27.91	-6.47	55.27	0.97	0.24433
31	presto/tpcds: q32	38.92	24.15	28.63	0.31	-26.44	-10.29	62.05	1.09	0.32114
52	presto/tpcds: q53	152.40	46.17	125.30	1.03	-17.78	-27.10	30.30	0.82	0.18115
95	presto/tpcds: q96	406.90	0.96	365.80	0.98	-10.10	-41.10	0.24	0.27	0.00000
36	presto/tpcds: q37	187.50	0.33	168.80	0.49	-9.97	-18.70	0.18	0.29	0.00000
81	presto/tpcds: q82	393.10	0.88	355.70	1.03	-9.51	-37.40	0.22	0.29	0.00000
87	presto/tpcds: q88	3438.70	7.99	3145.20	8.81	-8.54	-293.50	0.23	0.28	0.00000
2	presto/tpcds: q03	72.60	4.51	66.50	5.07	-8.40	-6.10	6.21	7.62	0.05216
62	presto/tpcds: q63	146.60	40.18	135.10	29.65	-7.84	-11.50	27.40	21.94	0.58506
70	presto/tpcds: q71	65.50	2.26	61.48	1.28	-6.14	-4.02	3.45	2.08	0.00350
79	presto/tpcds: q80	674.70	130.83	634.20	95.26	-6.00	-40.50	19.39	15.02	0.55357
54	presto/tpcds: q55	26.01	0.14	24.51	0.06	-5.77	-1.50	0.54	0.23	0.00000

	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
83	presto/tpcds: q84	96.20	1.40	90.70	0.45	-5.72	-5.50	1.46	0.50	0.00000
53	presto/tpcds: q54	621.10	18.44	586.90	15.89	-5.51	-34.20	2.97	2.71	0.00632
76	presto/tpcds: q77	53.59	0.45	50.65	0.50	-5.50	-2.95	0.84	0.99	0.00000
16	presto/tpcds: q17	247.90	5.88	235.10	4.70	-5.16	-12.80	2.37	2.00	0.00194
0	presto/tpcds: q01	216.20	2.36	205.60	1.18	-4.90	-10.60	1.09	0.57	0.00000
20	presto/tpcds: q21	11.93	0.10	11.35	0.10	-4.89	-0.58	0.82	0.87	0.00000
18	presto/tpcds: q19	68.90	0.80	65.70	0.33	-4.64	-3.20	1.16	0.50	0.00000
41	presto/tpcds: q42	25.92	0.09	24.77	0.07	-4.43	-1.15	0.35	0.30	0.00000
15	presto/tpcds: q16	488.80	7.26	467.60	2.23	-4.34	-21.20	1.48	0.48	0.00005
51	presto/tpcds: q52	26.61	0.04	25.52	0.19	-4.09	-1.09	0.14	0.73	0.00000
42	presto/tpcds: q43	298.30	0.45	287.60	2.73	-3.59	-10.70	0.15	0.95	0.00000
64	presto/tpcds: q65	1600.00	15.95	1543.40	14.08	-3.54	-56.60	1.00	0.91	0.00007
57	presto/tpcds: q58	49.27	0.61	47.64	0.47	-3.32	-1.63	1.24	0.99	0.00041
72	presto/tpcds: q73	37.48	0.15	36.28	0.14	-3.21	-1.20	0.39	0.40	0.00000
89	presto/tpcds: q90	205.60	0.73	199.30	0.70	-3.06	-6.30	0.35	0.35	0.00000
61	presto/tpcds: q62	314.70	1.35	306.00	1.00	-2.76	-8.70	0.43	0.33	0.00000
34	presto/tpcds: q35	201.30	0.83	195.90	2.30	-2.68	-5.40	0.41	1.17	0.00030
67	presto/tpcds: q68	61.50	0.33	59.88	0.41	-2.64	-1.62	0.53	0.68	0.00002
25	presto/tpcds: q26	141.30	0.50	137.60	1.12	-2.62	-3.70	0.36	0.81	0.00002
9	presto/tpcds: q10	46.45	0.30	45.24	0.14	-2.59	-1.20	0.65	0.31	0.00000
90	presto/tpcds: q91	11.82	1.46	11.52	0.43	-2.57	-0.30	12.32	3.76	0.63549
59	presto/tpcds: q60	78.20	1.18	76.20	0.54	-2.56	-2.00	1.51	0.70	0.00360
55	presto/tpcds: q56	27.53	0.06	26.83	0.18	-2.54	-0.70	0.20	0.69	0.00000
97	presto/tpcds: q98	25.02	0.20	24.38	0.13	-2.53	-0.63	0.79	0.53	0.00006
60	presto/tpcds: q61	159.60	0.66	155.60	0.49	-2.51	-4.00	0.41	0.31	0.00000
7	presto/tpcds: q08	96.10	1.16	93.70	0.24	-2.50	-2.40	1.21	0.26	0.00059
80	presto/tpcds: q81	249.60	1.31	243.40	1.35	-2.48	-6.20	0.53	0.55	0.00001
19	presto/tpcds: q20	15.31	0.08	14.94	0.14	-2.43	-0.37	0.51	0.91	0.00017
33	presto/tpcds: q34	111.90	0.50	109.30	0.45	-2.32	-2.60	0.45	0.41	0.00000
98	presto/tpcds: q99	665.80	1.68	651.80	1.05	-2.10	-14.00	0.25	0.16	0.00000
30	presto/tpcds: q31	405.00	3.62	396.50	5.82	-2.10	-8.50	0.89	1.47	0.01253
68	presto/tpcds: q69	45.35	0.65	44.49	0.60	-1.90	-0.86	1.44	1.36	0.03841
88	presto/tpcds: q89	261.40	0.98	256.50	0.63	-1.87	-4.90	0.37	0.25	0.00000
38	presto/tpcds: q39	46.59	0.48	45.73	0.23	-1.84	-0.86	1.03	0.50	0.00263

	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
29	presto/tpcds: q30	125.70	0.50	123.40	1.18	-1.83	-2.30	0.40	0.96	0.00135
78	presto/tpcds: q79	208.90	0.45	205.30	1.03	-1.72	-3.60	0.22	0.50	0.00001
4	presto/tpcds: q05	485.20	7.10	477.00	25.34	-1.69	-8.20	1.46	5.31	0.46287
17	presto/tpcds: q18	191.40	0.54	188.20	1.30	-1.67	-3.20	0.28	0.69	0.00023
32	presto/tpcds: q33	52.16	0.43	51.50	0.38	-1.27	-0.66	0.83	0.74	0.01857
11	presto/tpcds: q12	6.90	0.05	6.81	0.05	-1.26	-0.09	0.70	0.79	0.01459
93	presto/tpcds: q94	223.40	0.98	220.60	0.90	-1.25	-2.80	0.44	0.41	0.00043
43	presto/tpcds: q44	1067.70	4.27	1054.50	4.20	-1.24	-13.20	0.40	0.40	0.00030
65	presto/tpcds: q66	218.20	0.49	215.60	0.82	-1.19	-2.60	0.22	0.38	0.00006
23	presto/tpcds: q24	2949.40	27.75	2916.40	18.30	-1.12	-33.00	0.94	0.63	0.03536
5	presto/tpcds: q06	57.68	0.69	57.12	0.30	-0.97	-0.56	1.19	0.53	0.09755
44	presto/tpcds: q45	56.62	0.29	56.09	0.15	-0.93	-0.53	0.51	0.27	0.00275
77	presto/tpcds: q78	3447.50	76.86	3416.20	54.00	-0.91	-31.30	2.23	1.58	0.43339
85	presto/tpcds: q86	221.50	0.70	219.70	0.59	-0.81	-1.80	0.32	0.27	0.00071
47	presto/tpcds: q48	409.60	1.05	406.30	1.22	-0.81	-3.30	0.26	0.30	0.00053
74	presto/tpcds: q75	2050.50	3.12	2038.10	4.45	-0.60	-12.40	0.15	0.22	0.00023
50	presto/tpcds: q51	801.00	2.04	797.10	2.20	-0.49	-3.90	0.26	0.28	0.00985
58	presto/tpcds: q59	2523.10	8.04	2513.70	5.98	-0.37	-9.40	0.32	0.24	0.04453
14	presto/tpcds: q15	62.10	1.24	61.90	1.39	-0.32	-0.20	2.00	2.25	0.79818
73	presto/tpcds: q74	2079.20	8.00	2072.80	4.19	-0.31	-6.40	0.38	0.20	0.11322
56	presto/tpcds: q57	2314.70	8.93	2307.70	10.40	-0.30	-7.00	0.39	0.45	0.23929
49	presto/tpcds: q50	931.50	0.73	928.70	2.26	-0.30	-2.80	0.08	0.24	0.01616
45	presto/tpcds: q46	194.80	0.82	194.30	1.54	-0.26	-0.50	0.42	0.79	0.49815
71	presto/tpcds: q72	1389.20	11.05	1385.80	7.10	-0.24	-3.40	0.80	0.51	0.54032
28	presto/tpcds: q29	377.90	0.24	377.20	0.31	-0.19	-0.70	0.06	0.08	0.00146
86	presto/tpcds: q87	1241.90	3.75	1239.60	6.35	-0.19	-2.30	0.30	0.51	0.46239
48	presto/tpcds: q49	365.90	3.51	365.30	2.47	-0.16	-0.60	0.96	0.68	0.73903
37	presto/tpcds: q38	1226.70	6.39	1224.80	6.45	-0.15	-1.90	0.52	0.53	0.61935
35	presto/tpcds: q36	219.10	0.24	218.80	0.62	-0.14	-0.30	0.11	0.28	0.29594
3	presto/tpcds: q04	5328.00	0.00	5322.00	14.70	-0.11	-6.00	0.00	0.28	0.34089
82	presto/tpcds: q83	11.00	0.18	10.99	0.27	-0.11	-0.01	1.62	2.42	0.93076
13	presto/tpcds: q14	11994.00	57.67	11982.00	66.05	-0.10	-12.00	0.48	0.55	0.74440
26	presto/tpcds: q27	233.90	0.59	233.70	0.83	-0.09	-0.20	0.25	0.35	0.64001
1	presto/tpcds: q02	2020.70	36.65	2019.30	22.84	-0.07	-1.40	1.81	1.13	0.93827

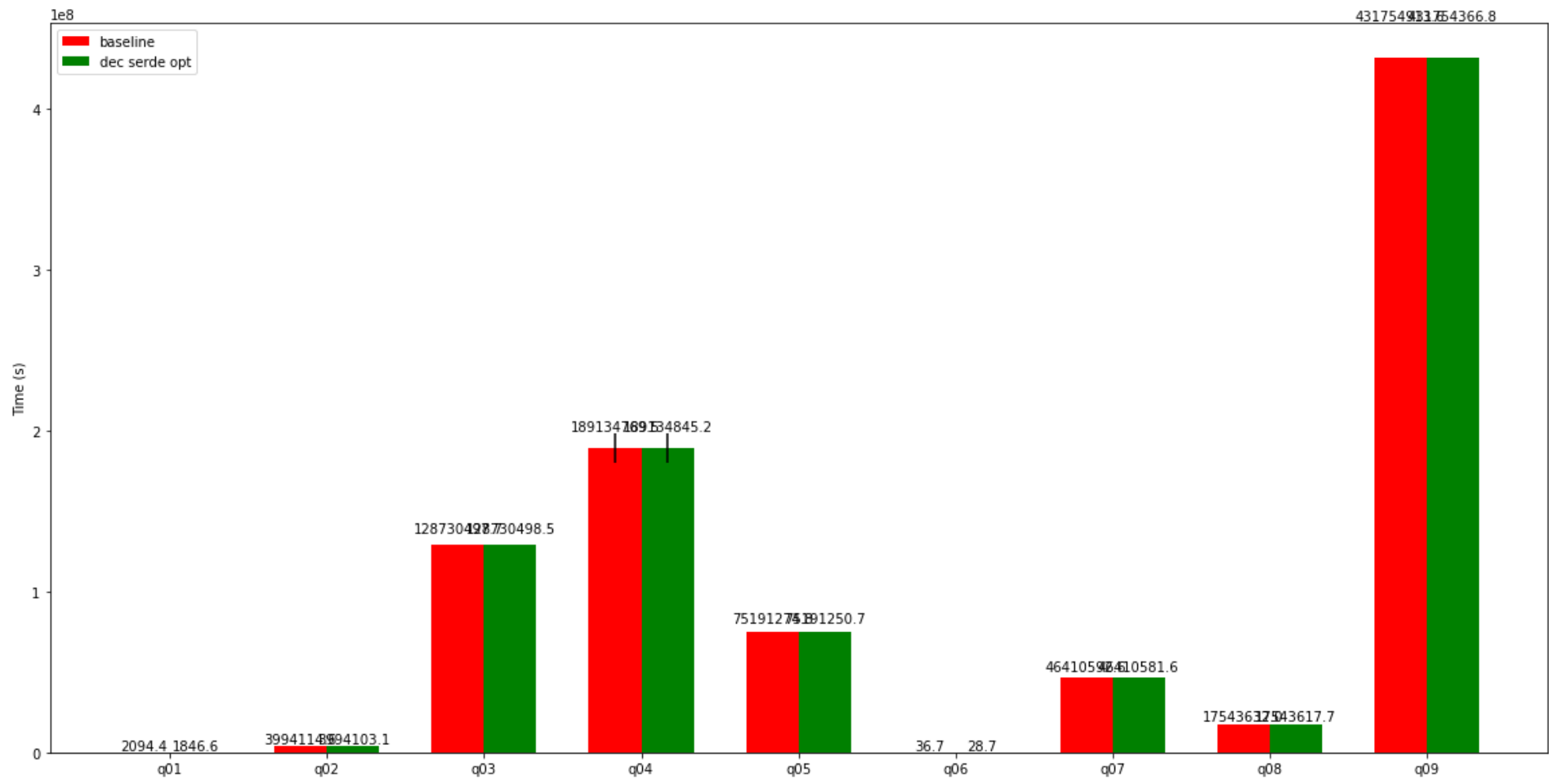
	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
40	presto/tpcds: q41	0.76	0.02	0.76	0.01	0.00	0.00	2.29	1.88	1.00000
8	presto/tpcds: q09	2329.50	7.45	2332.60	6.84	0.13	3.10	0.32	0.29	0.47010
75	presto/tpcds: q76	592.50	2.42	593.90	2.75	0.24	1.40	0.41	0.46	0.37120
6	presto/tpcds: q07	248.70	0.91	249.30	1.60	0.24	0.60	0.37	0.64	0.44289
84	presto/tpcds: q85	244.80	4.84	245.80	5.48	0.41	1.00	1.98	2.23	0.74467
39	presto/tpcds: q40	321.10	5.87	322.90	4.13	0.56	1.80	1.83	1.28	0.55278
69	presto/tpcds: q70	1170.50	29.55	1177.20	25.19	0.57	6.70	2.52	2.14	0.68149
94	presto/tpcds: q95	1230.90	1.46	1238.80	3.05	0.64	7.90	0.12	0.25	0.00019
21	presto/tpcds: q22	624.70	3.02	629.20	1.55	0.72	4.50	0.48	0.25	0.00878
12	presto/tpcds: q13	497.70	2.36	504.40	2.65	1.35	6.70	0.47	0.52	0.00094
10	presto/tpcds: q11	2771.80	12.86	2812.30	16.20	1.46	40.50	0.46	0.58	0.00073
24	presto/tpcds: q25	156.30	4.31	158.80	9.92	1.60	2.50	2.75	6.25	0.58376
66	presto/tpcds: q67	8478.00	19.72	8616.00	29.39	1.63	138.00	0.23	0.34	0.00000
27	presto/tpcds: q28	2686.90	7.84	2731.80	6.36	1.67	44.90	0.29	0.23	0.00000
96	presto/tpcds: q97	1110.30	17.46	1133.60	18.07	2.10	23.30	1.57	1.59	0.04646
46	presto/tpcds: q47	4632.00	54.20	4734.00	30.12	2.20	102.00	1.17	0.64	0.00240
22	presto/tpcds: q23	10920.00	49.19	11190.00	52.99	2.47	270.00	0.45	0.47	0.00000
63	presto/tpcds: q64	5550.00	35.39	5688.00	22.77	2.49	138.00	0.64	0.40	0.00001
92	presto/tpcds: q93	3296.70	11.93	3429.30	10.01	4.02	132.60	0.36	0.29	0.00000

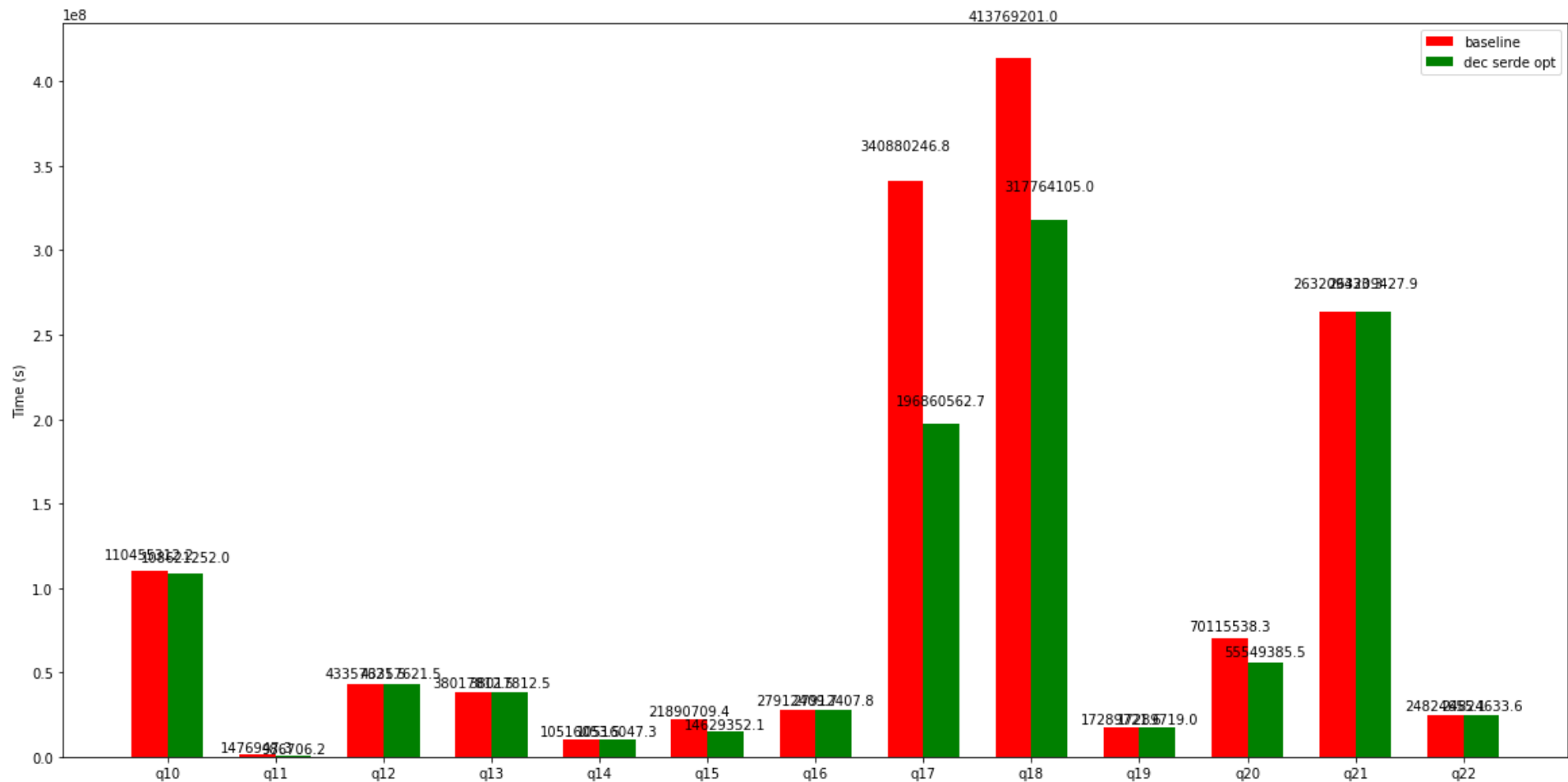
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TPC-H Comparison (Network)





	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
16	presto/tpch: q17	340880246.81	1288.30	196860562.69	23.31	-42.25	-144019684.12	0.00	0.00	0.00000
10	presto/tpch: q11	1476947.30	15585.93	986706.20	5767.63	-33.19	-490241.10	1.06	0.58	0.00000
14	presto/tpch: q15	21890709.41	202.97	14629352.11	93.66	-33.17	-7261357.30	0.00	0.00	0.00000
17	presto/tpch: q18	413769201.00	6715.56	317764104.99	1768.37	-23.20	-96005096.00	0.00	0.00	0.00000
5	presto/tpch: q06	36.69	0.18	28.67	0.09	-21.86	-8.02	0.48	0.30	0.00000
19	presto/tpch: q20	70115538.28	254.20	55549385.52	106.80	-20.77	-14566152.76	0.00	0.00	0.00000
0	presto/tpch: q01	2094.37	1.11	1846.63	2.97	-11.83	-247.73	0.05	0.16	0.00000
9	presto/tpch: q10	110455312.17	1460.93	108621252.05	1811.59	-1.66	-1834060.12	0.00	0.00	0.00000
1	presto/tpch: q02	3994114.62	15.47	3994103.13	16.83	-0.00	-11.49	0.00	0.00	0.24653
8	presto/tpch: q09	431754913.56	6.23	431754366.76	7.04	-0.00	-546.80	0.00	0.00	0.00000
21	presto/tpch: q22	24824655.12	0.00	24824633.62	0.00	-0.00	-21.50	0.00	0.00	0.00000
7	presto/tpch: q08	17543631.96	17.99	17543617.72	20.07	-0.00	-14.24	0.00	0.00	0.22473

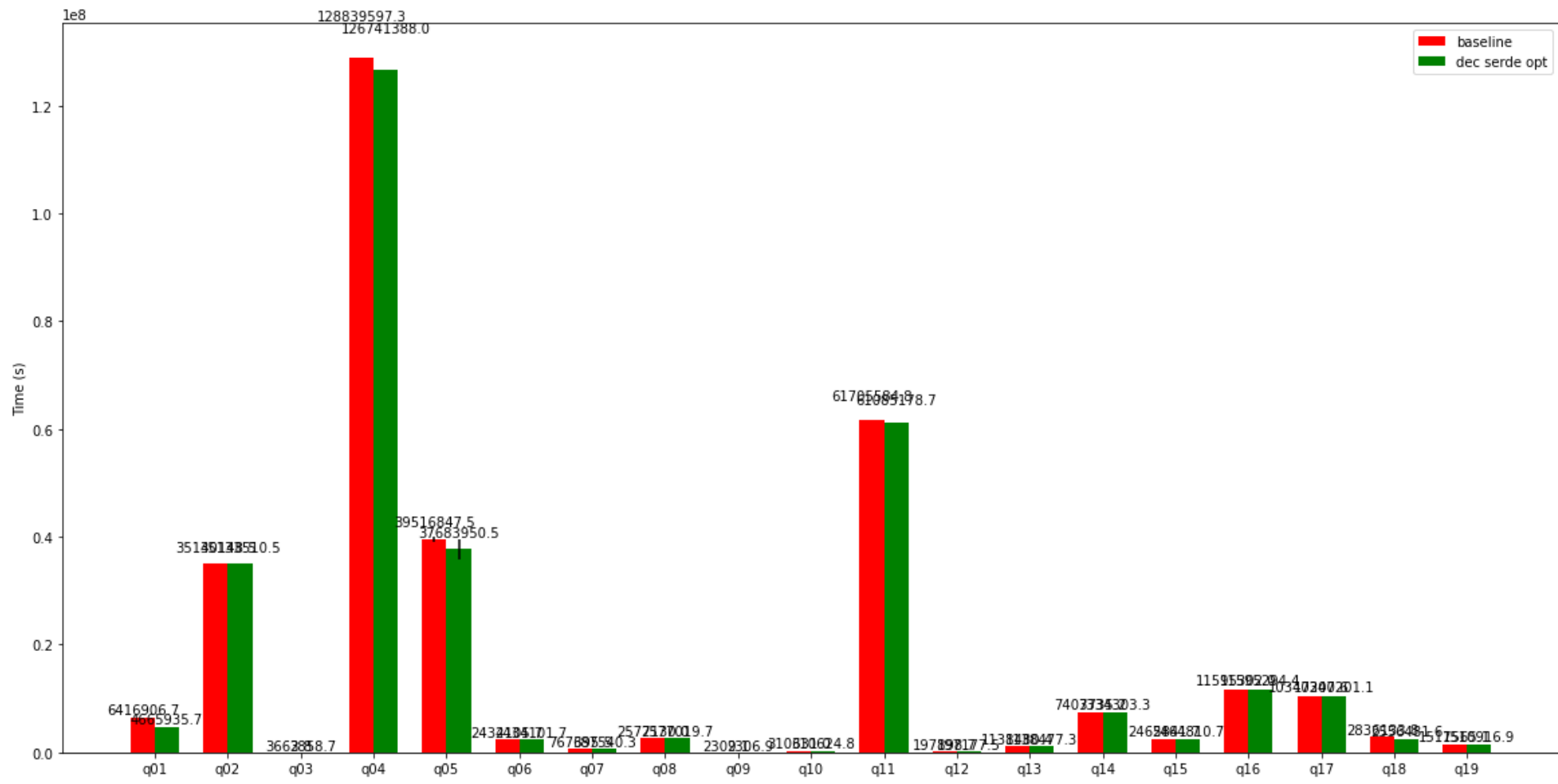
	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
13	presto/tpch: q14	10516053.48	0.00	10516047.33	0.00	-0.00	-6.14	0.00	0.00	0.00000
4	presto/tpch: q05	75191274.80	16.08	75191250.71	13.14	-0.00	-24.08	0.00	0.00	0.01752
6	presto/tpch: q07	46410592.56	2.15	46410581.62	2.82	-0.00	-10.94	0.00	0.00	0.00002
18	presto/tpch: q19	17289721.55	2.19	17289719.04	2.34	-0.00	-2.51	0.00	0.00	0.08434
15	presto/tpch: q16	27912409.69	3.05	27912407.85	5.03	-0.00	-1.84	0.00	0.00	0.46088
20	presto/tpch: q21	263209433.31	394.58	263209427.93	327.54	-0.00	-5.38	0.00	0.00	0.97999
11	presto/tpch: q12	43357621.51	0.00	43357621.51	0.00	0.00	0.00	0.00	0.00	nan
12	presto/tpch: q13	38017812.50	0.00	38017812.50	0.00	0.00	0.00	0.00	0.00	nan
2	presto/tpch: q03	128730497.74	14.47	128730498.53	24.18	0.00	0.79	0.00	0.00	0.94666
3	presto/tpch: q04	189134769.51	8988887.64	189134845.16	8988925.04	0.00	75.65	4.75	4.75	0.99999

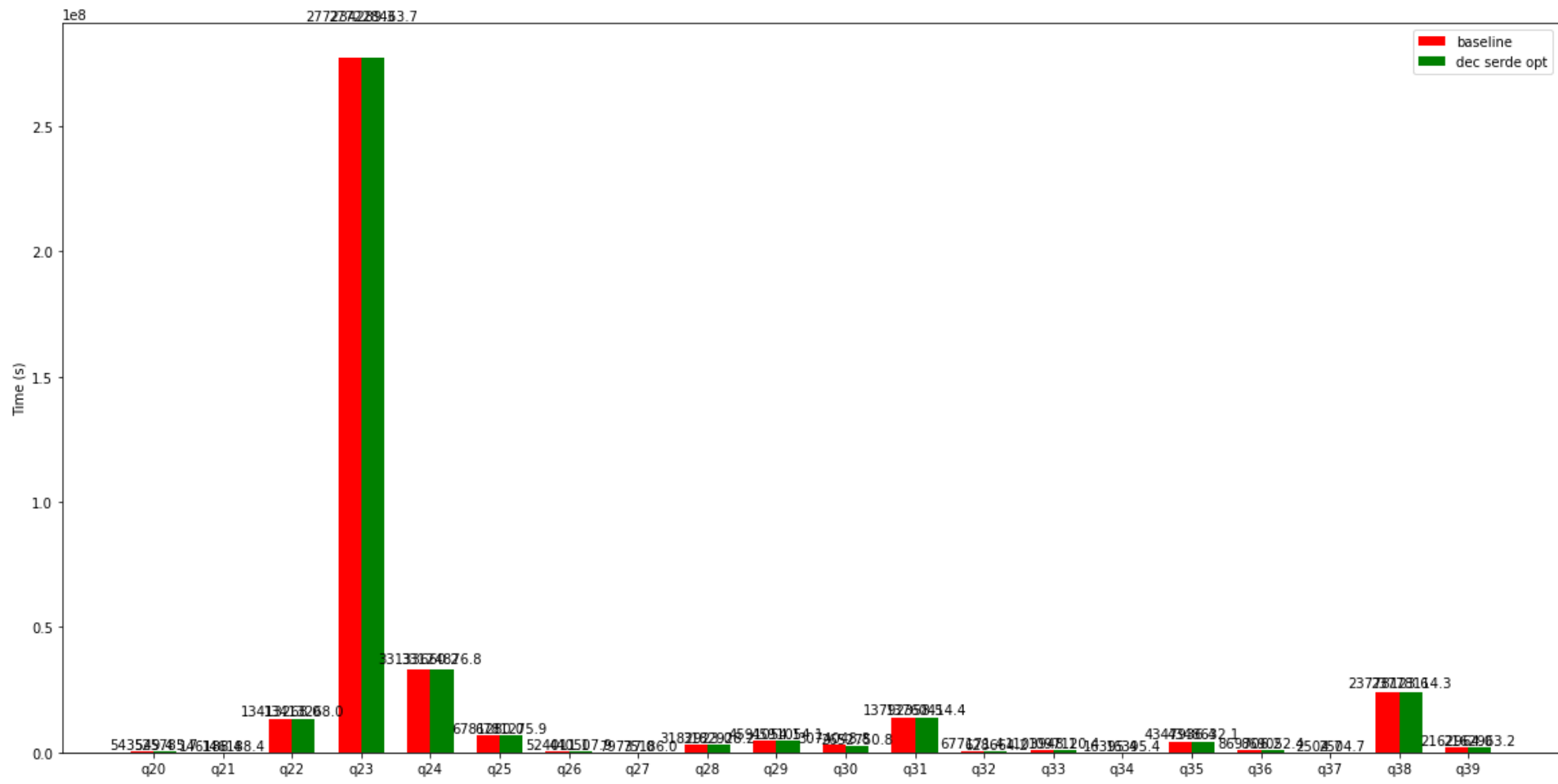
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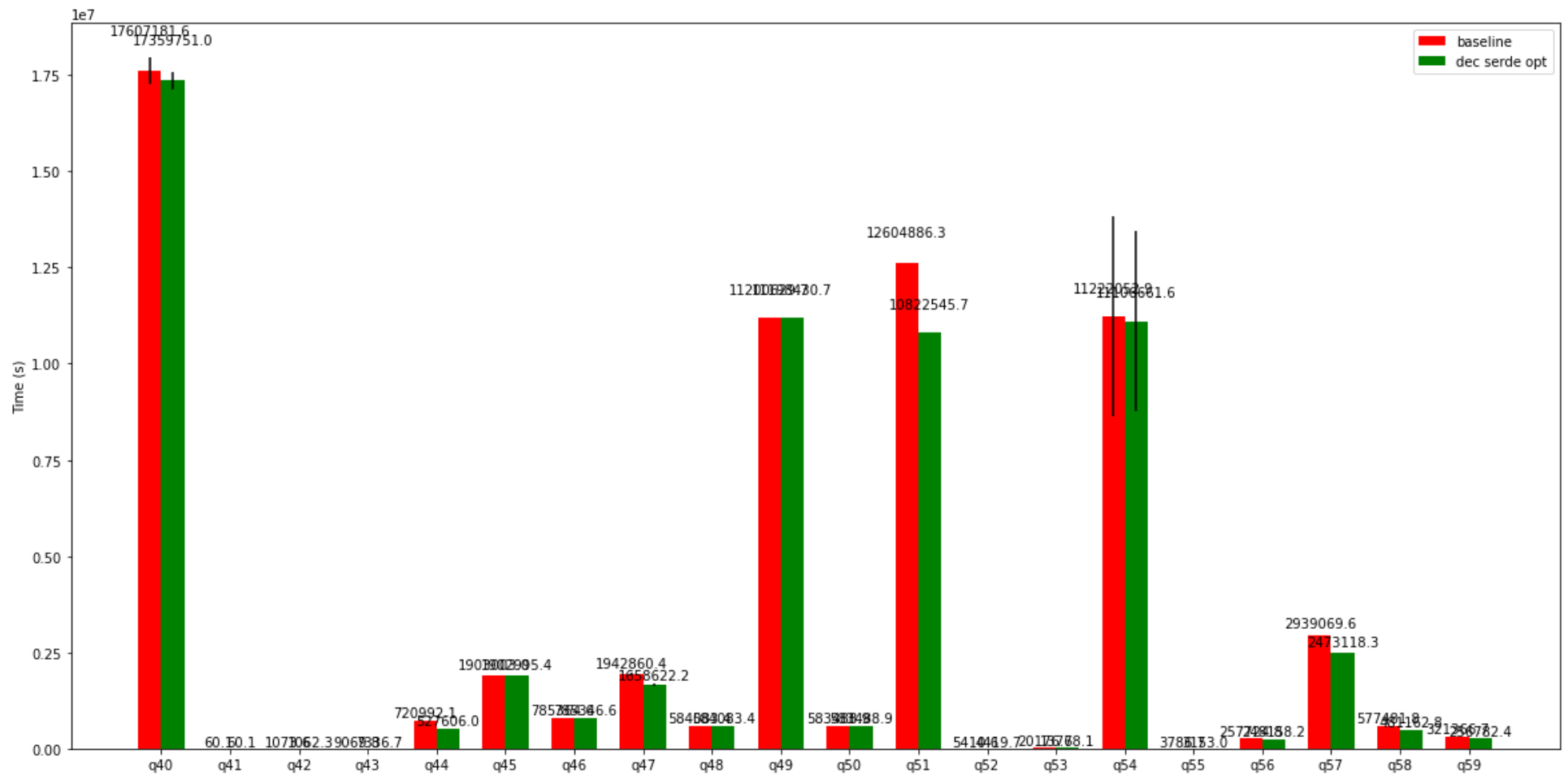
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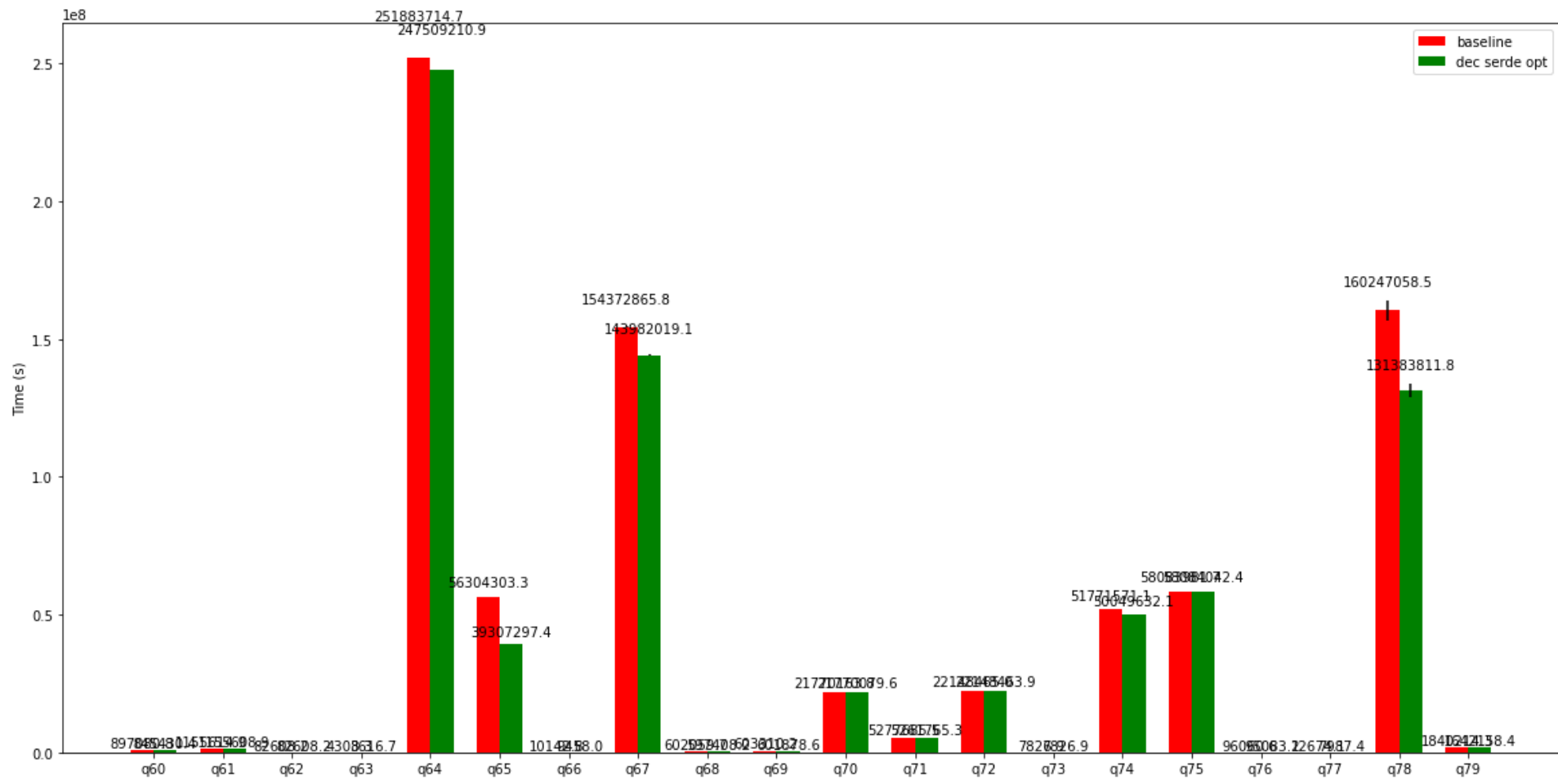
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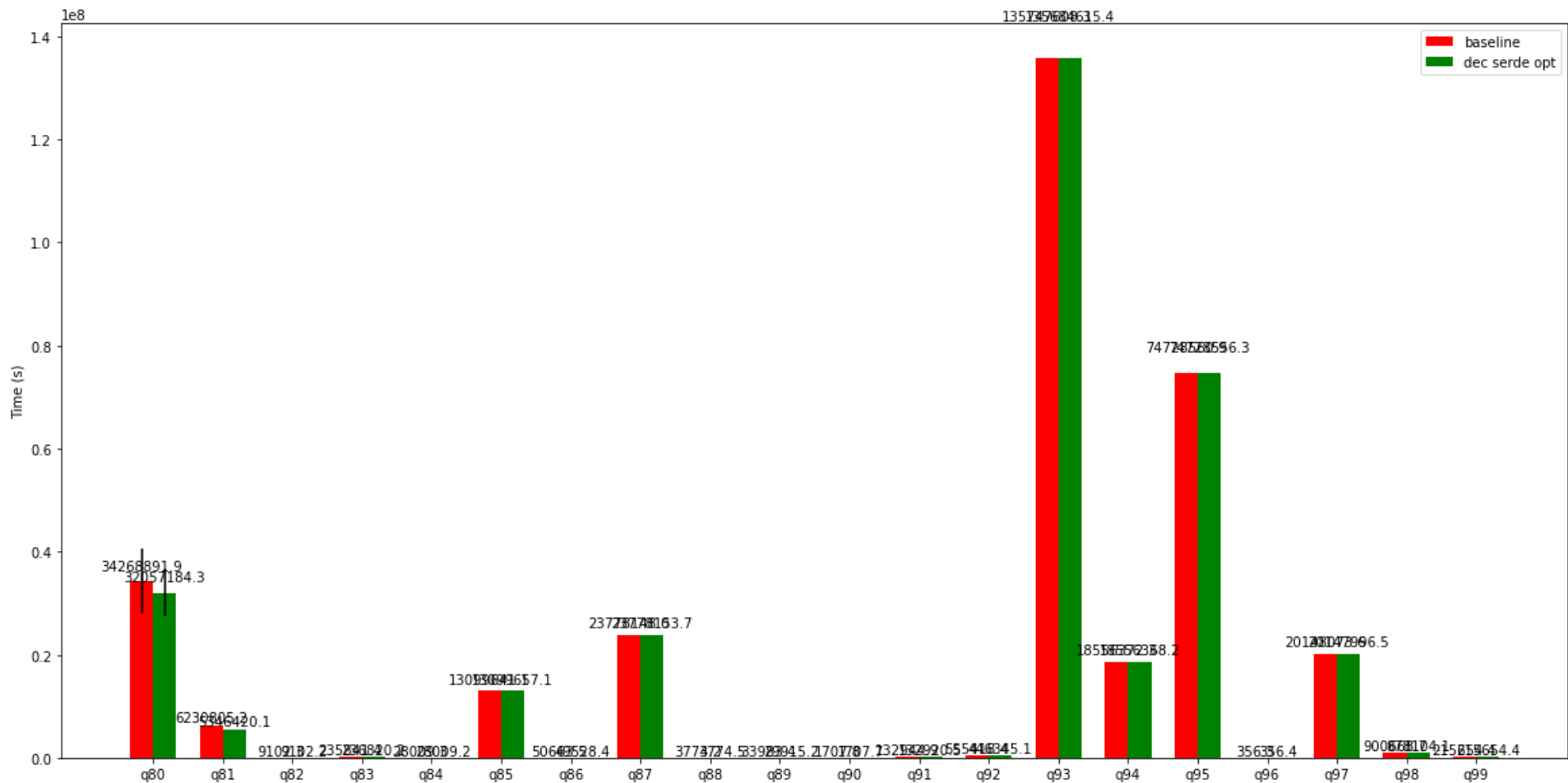
TPC-DS Comparison (Network)











	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
76	presto/tpcds: q77	12674.11	465.35	7987.37	421.70	-36.98	-4686.74	3.67	5.28	0.00000
52	presto/tpcds: q53	20176.63	0.00	13778.12	0.00	-31.71	-6398.51	0.00	0.00	0.00000
64	presto/tpcds: q65	56304303.29	3928.44	39307297.36	2309.68	-30.19	-16997005.93	0.01	0.01	0.00000
0	presto/tpcds: q01	6416906.68	2001.67	4665935.69	975.05	-27.29	-1750970.99	0.03	0.02	0.00000
43	presto/tpcds: q44	720992.07	21.36	527605.99	13.02	-26.82	-193386.08	0.00	0.00	0.00000
2	presto/tpcds: q03	3663.83	0.00	2858.71	0.00	-21.97	-805.12	0.00	0.00	0.00000
58	presto/tpcds: q59	321366.72	578.78	256782.38	204.33	-20.10	-64584.33	0.18	0.08	0.00000
91	presto/tpcds: q92	555418.35	0.00	446345.07	0.00	-19.64	-109073.29	0.00	0.00	0.00000
42	presto/tpcds: q43	9069.77	0.00	7336.73	0.00	-19.11	-1733.04	0.00	0.00	0.00000
51	presto/tpcds: q52	5410.64	0.00	4419.75	0.00	-18.31	-990.90	0.00	0.00	0.00000
77	presto/tpcds: q78	160247058.49	3874997.77	131383811.83	2492725.07	-18.01	-28863246.65	2.42	1.90	0.00000
54	presto/tpcds: q55	3786.73	0.00	3152.98	0.00	-16.74	-633.74	0.00	0.00	0.00000

	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
57	presto/tpcds: q58	577481.78	2785.63	481162.80	1240.55	-16.68	-96318.98	0.48	0.26	0.00000
62	presto/tpcds: q63	4308.33	0.00	3616.72	0.00	-16.05	-691.62	0.00	0.00	0.00000
25	presto/tpcds: q26	524011.08	6062.33	440507.93	5801.66	-15.94	-83503.15	1.16	1.32	0.00000
56	presto/tpcds: q57	2939069.58	0.00	2473118.31	0.00	-15.85	-465951.26	0.00	0.00	0.00000
46	presto/tpcds: q47	1942860.36	39637.57	1658622.19	22966.82	-14.63	-284238.17	2.04	1.38	0.00000
80	presto/tpcds: q81	6230805.22	29.86	5346420.13	66.75	-14.19	-884385.09	0.00	0.00	0.00000
50	presto/tpcds: q51	12604886.29	148.51	10822545.69	162.68	-14.14	-1782340.61	0.00	0.00	0.00000
29	presto/tpcds: q30	3074048.79	76.22	2652750.76	51.13	-13.70	-421298.03	0.00	0.00	0.00000
88	presto/tpcds: q89	33983.45	0.00	29915.19	0.00	-11.97	-4068.26	0.00	0.00	0.00000
78	presto/tpcds: q79	1840214.27	0.25	1642158.40	0.31	-10.76	-198055.87	0.00	0.00	0.00000
6	presto/tpcds: q07	767395.46	14524.37	687540.29	11063.61	-10.41	-79855.17	1.89	1.61	0.00000
17	presto/tpcds: q18	2836133.77	24.28	2556481.60	31.44	-9.86	-279652.17	0.00	0.00	0.00000
31	presto/tpcds: q32	677171.43	0.00	628664.18	0.00	-7.16	-48507.25	0.00	0.00	0.00000
65	presto/tpcds: q66	10142.77	0.00	9457.97	0.00	-6.75	-684.80	0.00	0.00	0.00000
66	presto/tpcds: q67	154372865.85	250862.30	143982019.08	202169.64	-6.73	-10390846.77	0.16	0.14	0.00000
79	presto/tpcds: q80	34268891.89	6388161.96	32057184.28	4652571.33	-6.45	-2211707.61	18.64	14.51	0.50860
59	presto/tpcds: q60	897080.78	2614.51	845430.44	1922.80	-5.76	-51650.34	0.29	0.23	0.00000
26	presto/tpcds: q27	79737.00	2.39	75186.02	3.09	-5.71	-4550.98	0.00	0.00	0.00000
4	presto/tpcds: q05	39516847.47	590434.78	37683950.54	1878018.72	-4.64	-1832896.93	1.49	4.98	0.04574
55	presto/tpcds: q56	257724.83	998.48	248158.18	922.48	-3.71	-9566.65	0.39	0.37	0.00000
73	presto/tpcds: q74	51771571.07	2083.59	50049632.07	2279.91	-3.33	-1721939.00	0.00	0.00	0.00000
19	presto/tpcds: q20	543549.43	6790.27	525785.75	8292.66	-3.27	-17763.68	1.25	1.58	0.00229
97	presto/tpcds: q98	900668.71	9741.66	878104.10	2880.27	-2.51	-22564.61	1.08	0.33	0.00028
85	presto/tpcds: q86	50663.53	0.22	49528.36	28.85	-2.24	-1135.18	0.00	0.06	0.00000
63	presto/tpcds: q64	251883714.74	43130.04	247509210.94	24013.90	-1.74	-4374503.79	0.02	0.01	0.00000
3	presto/tpcds: q04	128839597.35	590.52	126741387.98	510.48	-1.63	-2098209.37	0.00	0.00	0.00000
39	presto/tpcds: q40	17607181.65	345775.05	17359750.99	230294.42	-1.41	-247430.66	1.96	1.33	0.17529
41	presto/tpcds: q42	1073.62	0.00	1062.29	0.00	-1.06	-11.33	0.00	0.00	0.00000
53	presto/tpcds: q54	11222052.87	2594461.34	11106661.61	2326351.48	-1.03	-115391.26	23.12	20.95	0.93695
75	presto/tpcds: q76	96060.56	144.30	95083.25	121.48	-1.02	-977.31	0.15	0.13	0.00000
10	presto/tpcds: q11	61705584.76	46.51	61085178.69	33.83	-1.01	-620406.07	0.00	0.00	0.00000
13	presto/tpcds: q14	7403735.15	4051.05	7334303.30	17084.17	-0.94	-69431.85	0.05	0.23	0.00000
67	presto/tpcds: q68	602059.72	69.80	597408.17	40.45	-0.77	-4651.55	0.01	0.01	0.00000
32	presto/tpcds: q33	1103948.07	1188.12	1097120.40	538.22	-0.62	-6827.66	0.11	0.05	0.00000

	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
18	presto/tpcds: q19	1517565.14	0.00	1510916.90	0.00	-0.44	-6648.24	0.00	0.00	0.00000
11	presto/tpcds: q12	197898.67	0.00	197177.47	0.00	-0.36	-721.20	0.00	0.00	0.00000
70	presto/tpcds: q71	5277685.49	618.26	5261765.34	350.00	-0.30	-15920.15	0.01	0.01	0.00000
68	presto/tpcds: q69	603310.18	4826.00	601878.59	7905.45	-0.24	-1431.59	0.80	1.31	0.71290
30	presto/tpcds: q31	13792358.49	802.86	13760414.38	614.30	-0.23	-31944.11	0.01	0.00	0.00000
8	presto/tpcds: q09	2309.06	2.87	2306.93	3.14	-0.09	-2.12	0.12	0.14	0.24940
35	presto/tpcds: q36	869706.22	36.58	869052.38	44.72	-0.08	-653.85	0.00	0.01	0.00000
92	presto/tpcds: q93	135747608.25	235.01	135684615.40	165.21	-0.05	-62992.86	0.00	0.00	0.00000
14	presto/tpcds: q15	2465841.74	11.01	2464810.71	4.40	-0.04	-1031.02	0.00	0.00	0.00000
23	presto/tpcds: q24	33133660.21	24.07	33124876.76	47.02	-0.03	-8783.45	0.00	0.00	0.00000
48	presto/tpcds: q49	11200629.74	0.91	11198430.68	0.00	-0.02	-2199.06	0.00	0.00	0.00000
1	presto/tpcds: q02	35140148.52	283.20	35133510.50	216.60	-0.02	-6638.01	0.00	0.00	0.00000
90	presto/tpcds: q91	132944.93	12.49	132920.45	18.55	-0.02	-24.47	0.01	0.01	0.02306
89	presto/tpcds: q90	1707.82	0.18	1707.69	0.42	-0.01	-0.13	0.01	0.02	0.49277
7	presto/tpcds: q08	2577129.99	64.38	2577019.67	130.54	-0.00	-110.32	0.00	0.01	0.09304
45	presto/tpcds: q46	785364.61	30.13	785346.55	62.12	-0.00	-18.05	0.00	0.01	0.53624
22	presto/tpcds: q23	277234289.31	22867.44	277228463.71	30727.15	-0.00	-5825.60	0.01	0.01	0.71725
9	presto/tpcds: q10	310630.99	15.25	310624.77	0.00	-0.00	-6.23	0.00	0.00	0.34089
81	presto/tpcds: q82	9102.29	10.69	9102.21	6.21	-0.00	-0.07	0.12	0.07	0.98856
60	presto/tpcds: q61	1155614.88	0.40	1155608.90	0.51	-0.00	-5.98	0.00	0.00	0.00000
44	presto/tpcds: q45	1903003.03	27.04	1902995.35	24.92	-0.00	-7.68	0.00	0.00	0.62015
69	presto/tpcds: q70	21770163.79	13.93	21770079.61	4.22	-0.00	-84.18	0.00	0.00	0.00000
96	presto/tpcds: q97	20148073.58	242.09	20147996.50	500.71	-0.00	-77.08	0.00	0.00	0.74125
12	presto/tpcds: q13	1138480.42	0.05	1138477.35	0.05	-0.00	-3.07	0.00	0.00	0.00000
5	presto/tpcds: q06	2434105.71	14.40	2434101.73	12.26	-0.00	-3.98	0.00	0.00	0.61758
83	presto/tpcds: q84	28009.25	0.00	28009.21	0.06	-0.00	-0.04	0.00	0.00	0.14493
15	presto/tpcds: q16	11595301.96	5.14	11595294.45	5.95	-0.00	-7.51	0.00	0.00	0.04128
24	presto/tpcds: q25	6781279.97	4.98	6781275.94	0.00	-0.00	-4.04	0.00	0.00	0.07521
37	presto/tpcds: q38	23778123.65	152.82	23778114.34	125.17	-0.00	-9.31	0.00	0.00	0.91038
38	presto/tpcds: q39	2162963.98	4.12	2162963.18	4.60	-0.00	-0.80	0.00	0.00	0.75732
93	presto/tpcds: q94	18556372.34	3.77	18556368.18	1.59	-0.00	-4.16	0.00	0.00	0.03222
33	presto/tpcds: q34	16395.37	0.00	16395.37	0.00	-0.00	-0.00	0.00	0.00	0.34089
94	presto/tpcds: q95	74728560.92	0.00	74728556.28	0.00	-0.00	-4.64	0.00	0.00	0.00000
71	presto/tpcds: q72	22148464.97	7.62	22148463.86	10.86	-0.00	-1.11	0.00	0.00	0.84154

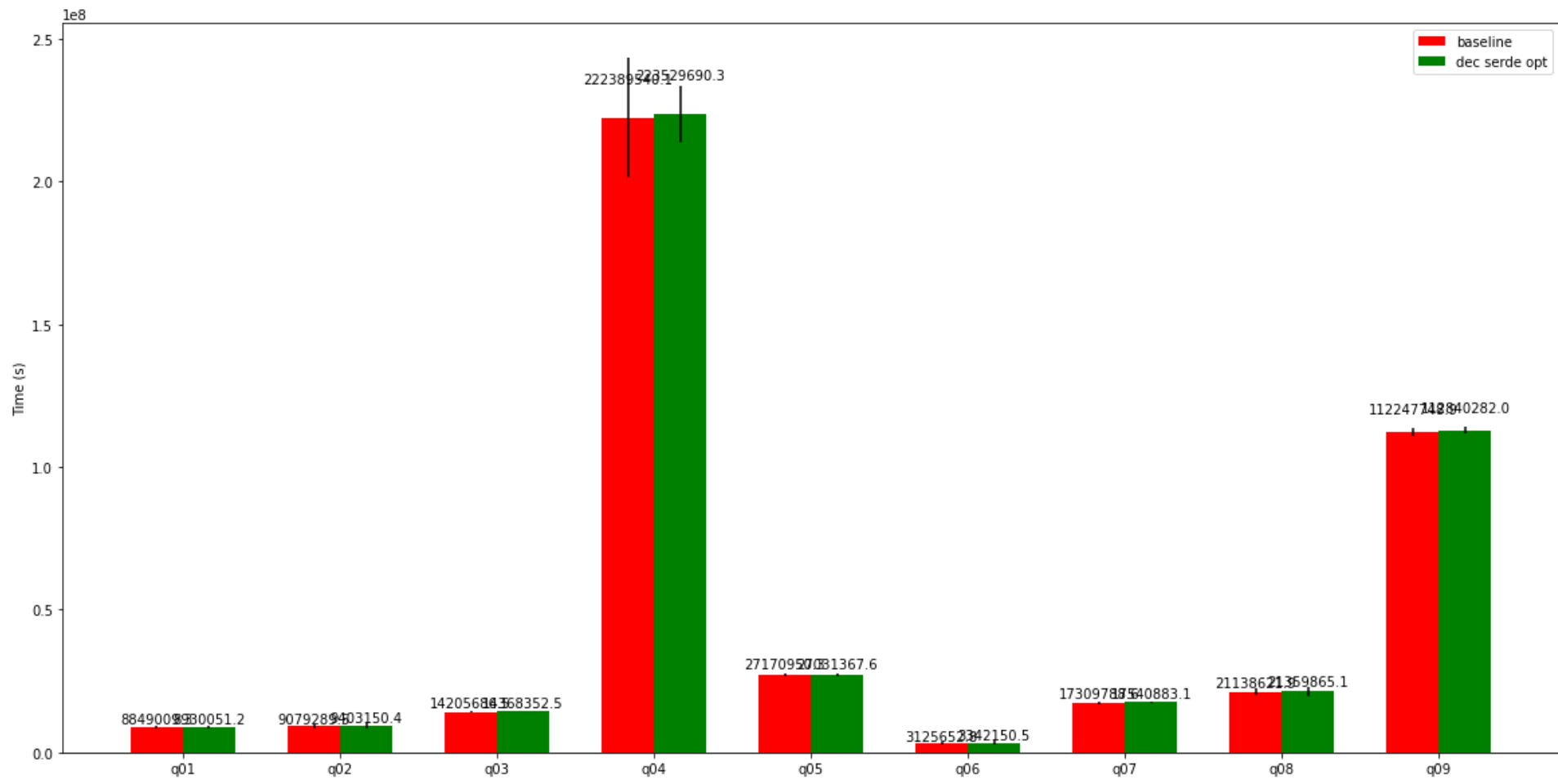
	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
49	presto/tpcds: q50	583488.94	0.00	583488.94	0.00	0.00	0.00	0.00	0.00	nan
36	presto/tpcds: q37	2504.65	0.00	2504.65	0.00	0.00	0.00	0.00	0.00	nan
20	presto/tpcds: q21	146188.43	0.00	146188.43	0.00	0.00	0.00	0.00	0.00	nan
21	presto/tpcds: q22	13413268.05	0.00	13413268.05	0.00	0.00	0.00	0.00	0.00	nan
28	presto/tpcds: q29	4591054.11	11.35	4591054.11	11.35	0.00	0.00	0.00	0.00	1.00000
40	presto/tpcds: q41	60.07	0.00	60.07	0.00	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	0.00	nan
47	presto/tpcds: q48	584083.40	0.00	584083.40	0.00	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	0.00	nan
16	presto/tpcds: q17	10347200.59	43.10	10347201.07	31.36	0.00	0.48	0.00	0.00	0.98276
86	presto/tpcds: q87	23778148.02	136.37	23778153.71	112.28	0.00	5.69	0.00	0.00	0.93870
74	presto/tpcds: q75	58083981.68	232.35	58084042.43	230.96	0.00	60.76	0.00	0.00	0.65935
84	presto/tpcds: q85	13099641.13	221.69	13099657.11	123.77	0.00	15.98	0.00	0.00	0.88054
72	presto/tpcds: q73	7826.92	0.01	7826.93	0.02	0.00	0.01	0.00	0.00	0.36311
27	presto/tpcds: q28	3182922.96	7.83	3182928.15	5.55	0.00	5.19	0.00	0.00	0.21465
95	presto/tpcds: q96	356.34	0.06	356.36	0.04	0.01	0.02	0.02	0.01	0.43812
87	presto/tpcds: q88	3774.20	0.50	3774.48	0.48	0.01	0.28	0.01	0.01	0.34972
34	presto/tpcds: q35	4347936.41	360.60	4348632.11	467.47	0.02	695.70	0.01	0.01	0.01621
82	presto/tpcds: q83	235841.38	4908.55	236820.19	2407.08	0.42	978.82	2.08	1.02	0.67030

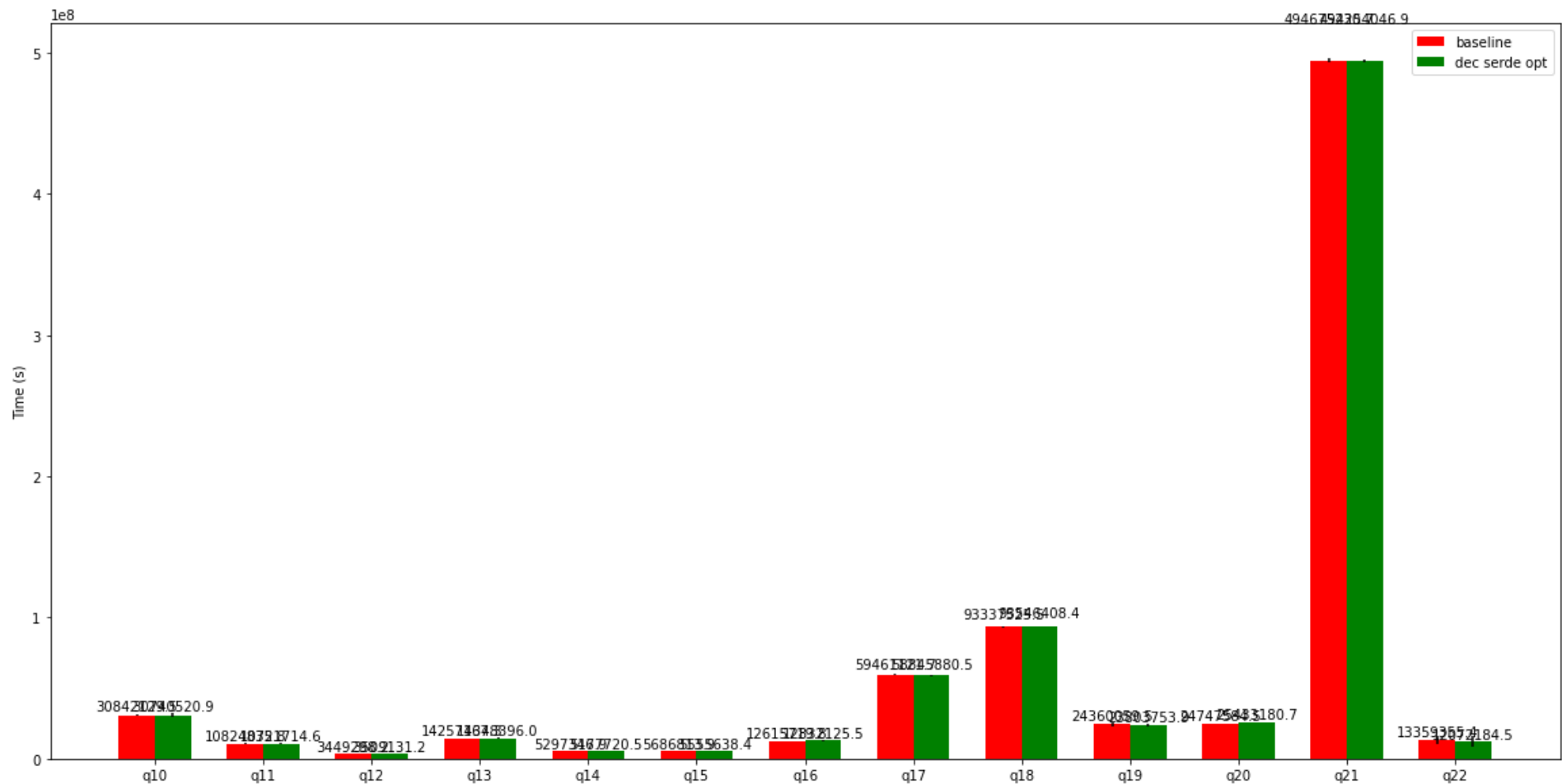
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TPC-H Comparison (Peak memory)





	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
21	presto/tpch: q22	13359355.39	3215504.61	12072184.46	3812213.06	-9.63	-1287170.93	24.07	31.58	0.54144
14	presto/tpch: q15	5686813.89	33678.83	5556638.43	28658.94	-2.31	-131175.46	0.59	0.52	0.00003
18	presto/tpch: q19	24360059.48	1145309.55	23803753.85	904802.07	-2.28	-556305.63	4.70	3.80	0.37251
13	presto/tpch: q14	5297346.93	56182.70	5177720.53	49551.17	-2.26	-119626.40	1.06	0.96	0.00291
16	presto/tpch: q17	59461121.75	593707.76	58845880.49	375622.11	-1.03	-615241.26	1.00	0.64	0.05754
10	presto/tpch: q11	10824835.85	391339.90	10721714.60	418929.35	-0.95	-103121.25	3.62	3.91	0.66887
4	presto/tpch: q05	27170950.28	418271.85	27031367.64	561614.46	-0.51	-139582.64	1.54	2.08	0.63590
9	presto/tpch: q10	30842129.48	448987.97	30740520.95	1346736.71	-0.33	-101608.53	1.46	4.38	0.86433
20	presto/tpch: q21	494675230.66	1511959.83	494254046.91	1076906.67	-0.09	-421183.74	0.31	0.22	0.59058
17	presto/tpch: q18	93337525.49	152092.18	93546408.40	153624.11	0.22	20882.91	0.16	0.16	0.03949
3	presto/tpch: q04	222389540.11	20945173.09	223529690.33	9897133.54	0.51	1140150.22	9.42	4.43	0.90643
8	presto/tpch: q09	112247748.91	1266401.34	112840282.03	1069341.84	0.53	592533.13	1.13	0.95	0.40176

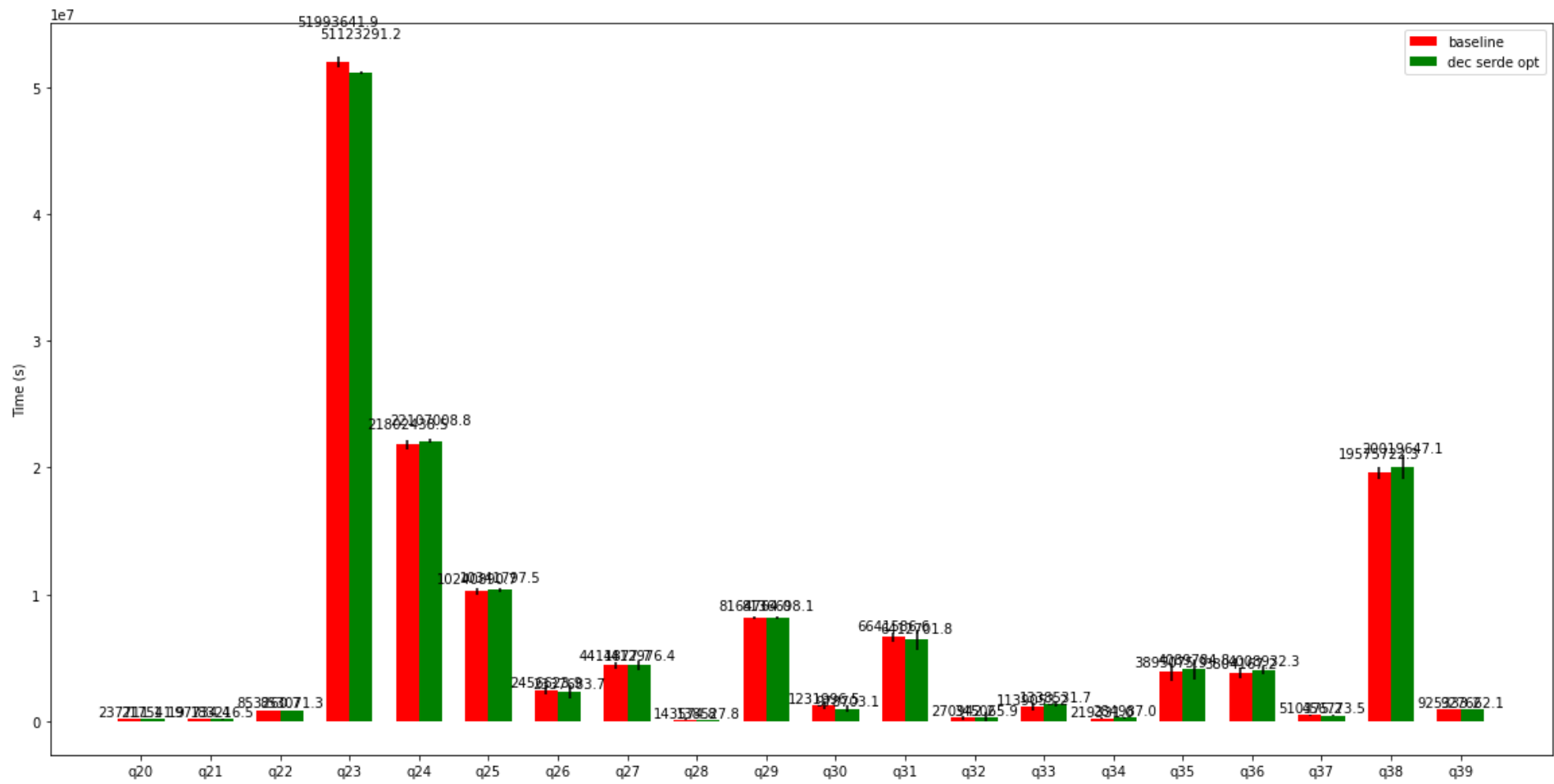
	query	baseline mean	baseline std.dev	dec serde opt mean	dec serde opt std.dev	% change	absolute change	baseline std.dev %	dec serde opt std.dev %	p-value
12	presto/tpch: q13	14257167.34	220533.07	14348396.00	393321.75	0.64	91228.66	1.55	2.74	0.63091
0	presto/tpch: q01	8849009.28	486417.41	8930051.21	453770.36	0.92	81041.93	5.50	5.08	0.77149
7	presto/tpch: q08	21138621.92	1119801.46	21359865.09	1490627.57	1.05	221243.18	5.30	6.98	0.77724
2	presto/tpch: q03	14205686.46	363506.21	14368352.47	30479.35	1.15	162666.01	2.56	0.21	0.30032
6	presto/tpch: q07	17309788.60	374247.30	17540883.06	436944.45	1.34	231094.46	2.16	2.49	0.34836
15	presto/tpch: q16	12615719.76	62829.59	12832125.46	346821.20	1.72	216405.70	0.50	2.70	0.16351
11	presto/tpch: q12	3449298.17	149220.09	3509131.20	160405.36	1.73	59833.04	4.33	4.57	0.51865
19	presto/tpch: q20	24747584.51	169585.23	25433180.71	105740.78	2.77	685596.19	0.69	0.42	0.00001
1	presto/tpch: q02	9079289.46	499305.30	9403150.40	1049721.52	3.57	323860.93	5.50	11.16	0.51045
5	presto/tpch: q06	3125652.79	478527.87	3342150.50	560897.99	6.93	216497.71	15.31	16.78	0.48844

```

count      22
mean        0
std         3
min        -10
25%        -1
50%         1
75%         1
max         7
Name: % change, dtype: float64

```

TPC-DS Comparison (Peak memory)



TPC-H Comparison (physicalInputDataSize)