

Out[86]:

[Show Code](#)

FAILED QUERIES

rank before

benchmark	query	mean_duration	std_dev
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rank after

benchmark	query	mean_duration	std_dev
-----------	-------	---------------	---------

rank after

benchmark	query	mean_duration	std_dev
-----------	-------	---------------	---------

TPC-H Comparison (DURATION)

```

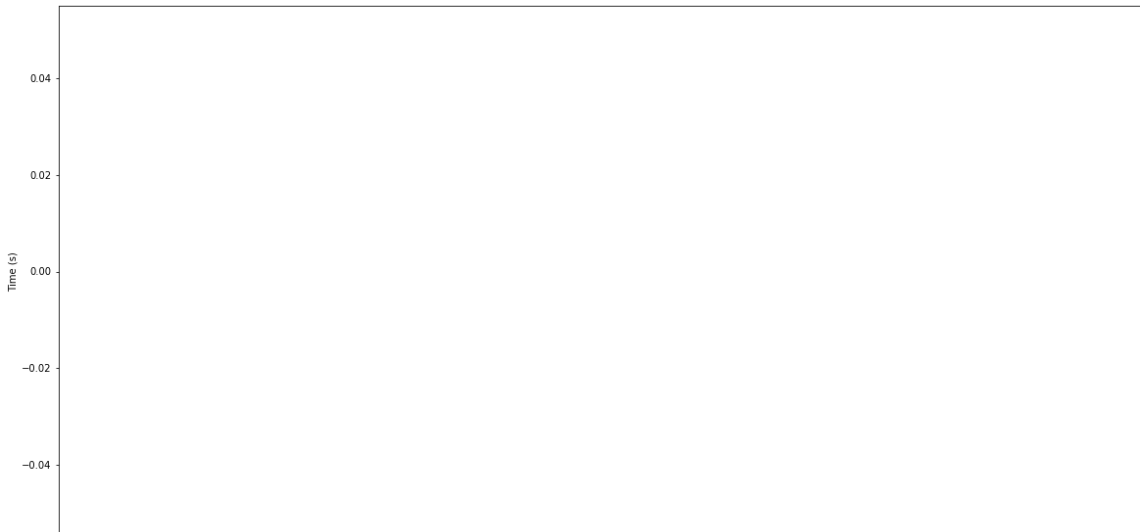
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-----
IndexError                                Traceback (most recent call
last)
<ipython-input-89-bed199fba9e9> in <module>()
----> 1 compare_benchmark_runs(benchmarks, benchmark='%tpch', query
='q0%', metric='duration')

<ipython-input-87-e77f6193a9c1> in compare_benchmark_runs(benchmark
s, benchmark, query, env_name, metric)
    166     query_labels=[key.split(':')[1].strip() for key in all_k
keys]
    167     ax.set_xticklabels(query_labels)
--> 168     ax.legend([rect[0] for rect in rects], labels)
    169
    170     for rect in rects:

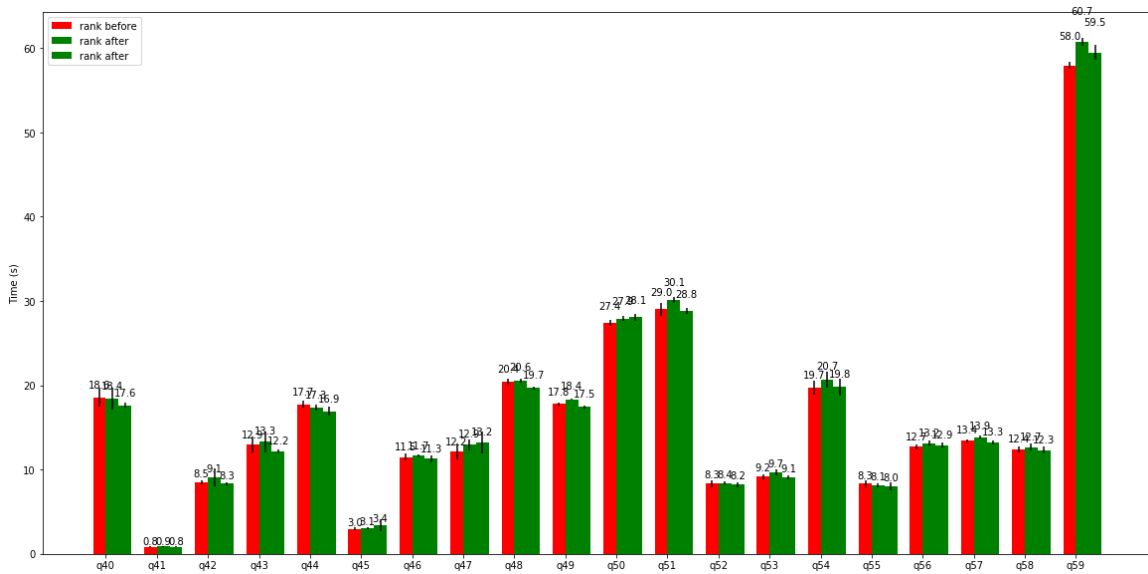
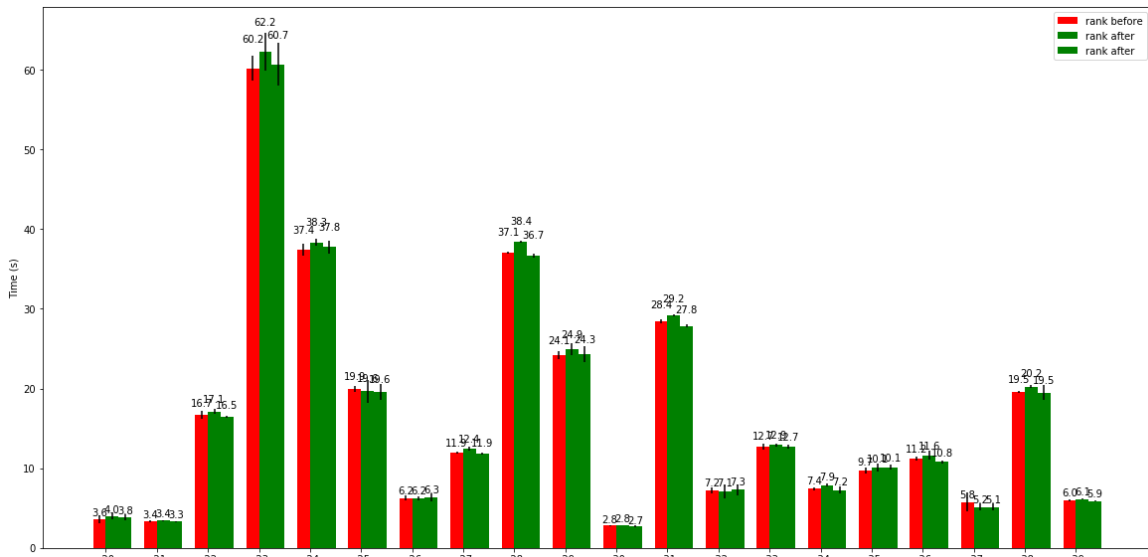
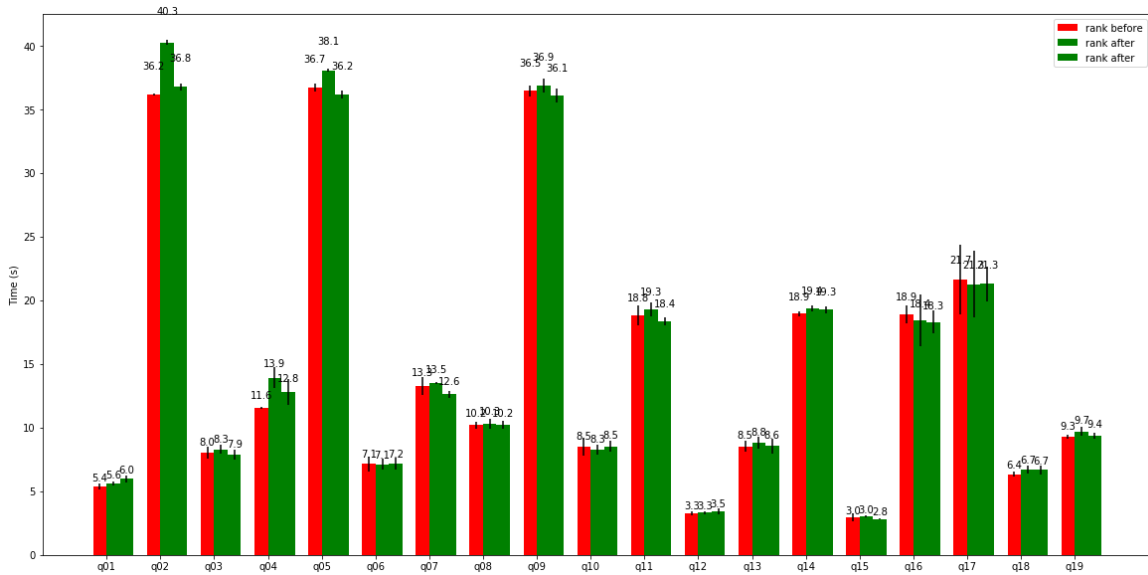
<ipython-input-87-e77f6193a9c1> in <listcomp>(.0)
    166     query_labels=[key.split(':')[1].strip() for key in all_k
keys]
    167     ax.set_xticklabels(query_labels)
--> 168     ax.legend([rect[0] for rect in rects], labels)
    169
    170     for rect in rects:

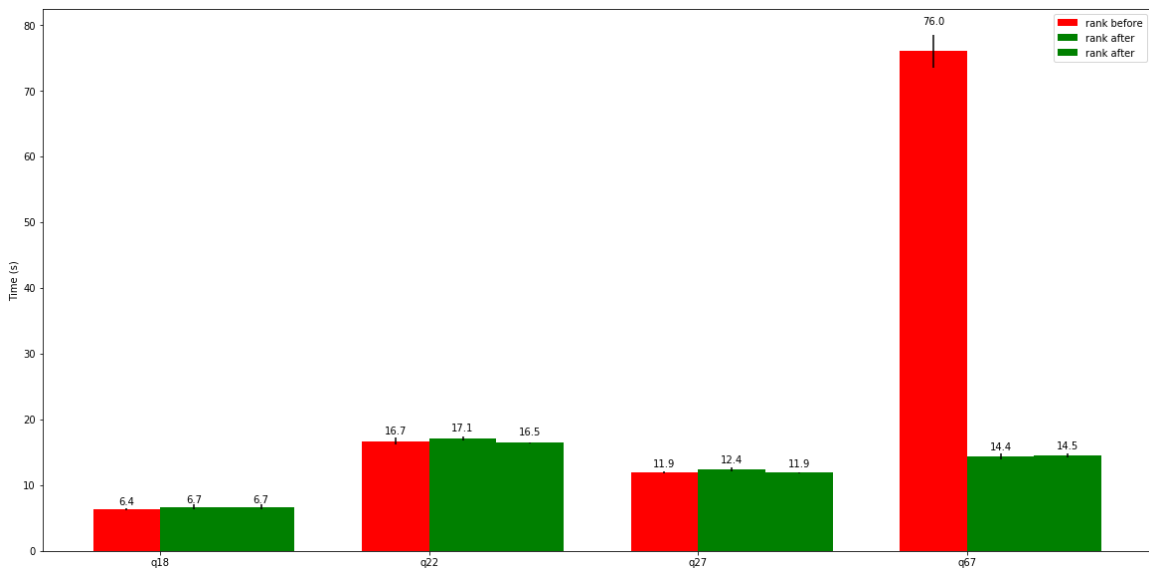
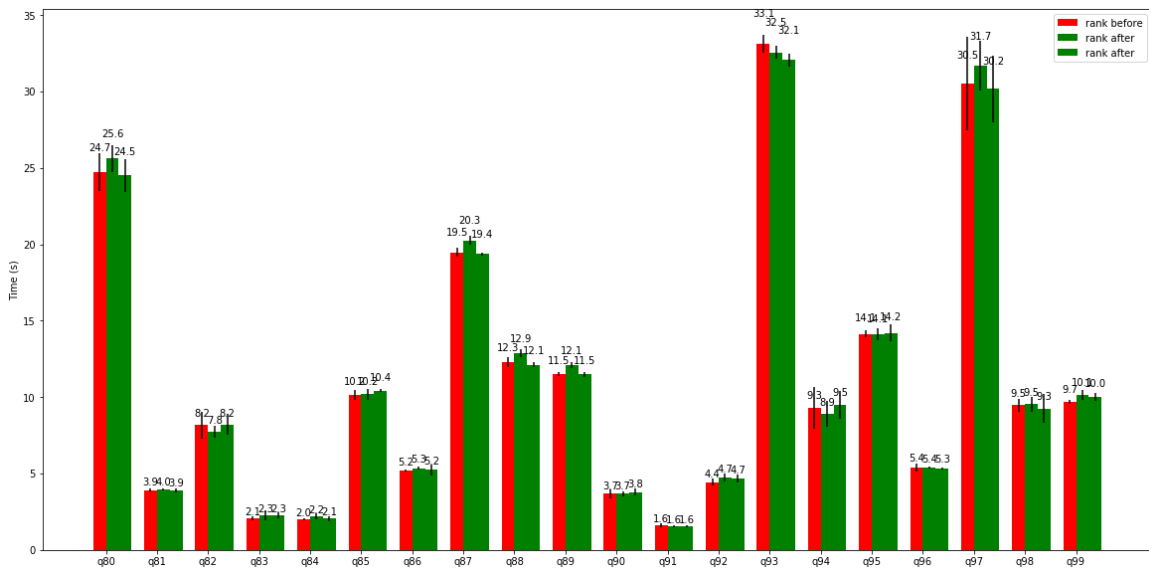
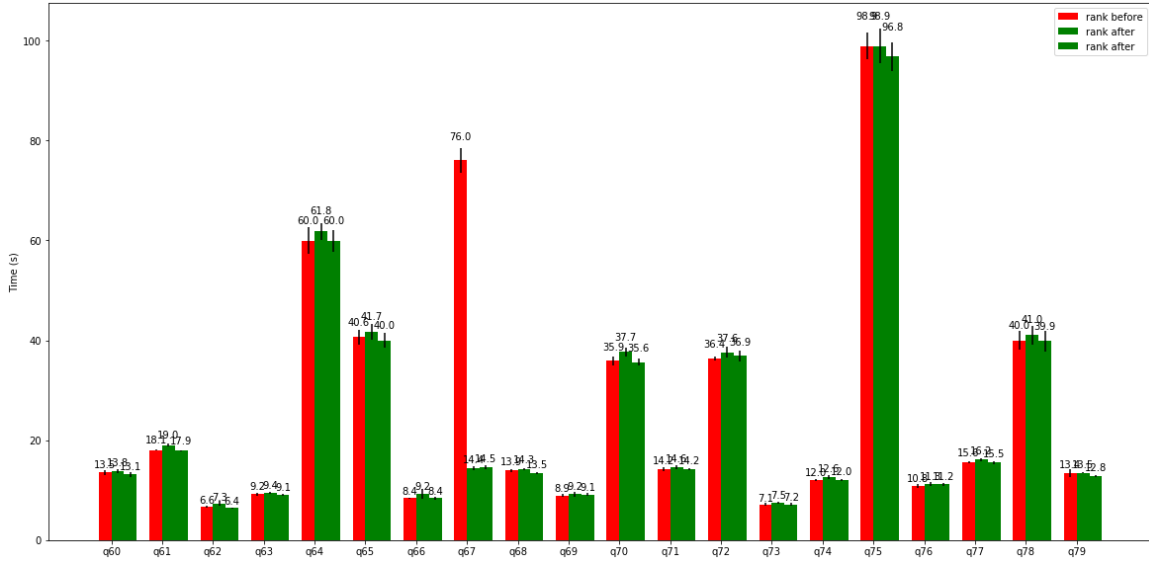
```

IndexError: tuple index out of range



TPC-DS Comparison (DURATION)





	query	rank before mean	rank before std.dev	rank after mean	rank after std.dev	rank after mean	rank after std.dev
0	presto/tpcds: q01	5.379000	0.220460	5.973667	0.262894	5.973667	0.262894
1	presto/tpcds: q02	36.185000	0.050876	36.794833	0.271073	36.794833	0.271073
2	presto/tpcds: q03	8.045500	0.454350	7.873333	0.415071	7.873333	0.415071
3	presto/tpcds: q04	11.560333	0.075627	12.821667	1.012573	12.821667	1.012573
4	presto/tpcds: q05	36.734167	0.300134	36.185667	0.293740	36.185667	0.293740
5	presto/tpcds: q06	7.141333	0.572620	7.160833	0.474781	7.160833	0.474781
6	presto/tpcds: q07	13.277333	0.713796	12.618500	0.298976	12.618500	0.298976
7	presto/tpcds: q08	10.189333	0.246248	10.226000	0.279590	10.226000	0.279590
8	presto/tpcds: q09	36.457500	0.452693	36.083000	0.564007	36.083000	0.564007
9	presto/tpcds: q10	8.510167	0.716991	8.543333	0.403958	8.543333	0.403958
10	presto/tpcds: q11	18.832000	0.806694	18.370000	0.294914	18.370000	0.294914
11	presto/tpcds: q12	3.260667	0.172634	3.451500	0.242006	3.451500	0.242006
12	presto/tpcds: q13	8.544500	0.420162	8.551833	0.558165	8.551833	0.558165
13	presto/tpcds: q14	18.947000	0.161410	19.264167	0.293314	19.264167	0.293314
14	presto/tpcds: q15	2.950500	0.318383	2.815667	0.024622	2.815667	0.024622
15	presto/tpcds: q16	18.901167	0.687948	18.290333	0.902798	18.290333	0.902798
16	presto/tpcds: q17	21.650833	2.764540	21.312167	1.381964	21.312167	1.381964
17	presto/tpcds: q18	6.353000	0.187188	6.677333	0.375407	6.677333	0.375407
18	presto/tpcds: q19	9.262333	0.165652	9.386667	0.235760	9.386667	0.235760

	query	rank before mean	rank before std.dev	rank after mean	rank after std.dev	rank after mean	rank after std.dev
19	presto/tpcds: q20	3.595000	0.453360	3.825667	0.395879	3.825667	0.395879
20	presto/tpcds: q21	3.367667	0.154301	3.308333	0.058967	3.308333	0.058967
21	presto/tpcds: q22	16.710667	0.480550	16.453333	0.092491	16.453333	0.092491
22	presto/tpcds: q23	60.171667	1.549647	60.687833	2.633389	60.687833	2.633389
23	presto/tpcds: q24	37.413000	0.778885	37.766167	0.797325	37.766167	0.797325
24	presto/tpcds: q25	19.941500	0.423066	19.553667	0.980568	19.553667	0.980568
25	presto/tpcds: q26	6.239500	0.305011	6.298667	0.512128	6.298667	0.512128
26	presto/tpcds: q27	11.932333	0.159520	11.879833	0.117809	11.879833	0.117809
27	presto/tpcds: q28	37.072000	0.155733	36.711500	0.262014	36.711500	0.262014
28	presto/tpcds: q29	24.141000	0.494686	24.295667	0.962186	24.295667	0.962186
29	presto/tpcds: q30	2.787500	0.103224	2.709500	0.074309	2.709500	0.074309
30	presto/tpcds: q31	28.446833	0.217674	27.833333	0.191853	27.833333	0.191853
31	presto/tpcds: q32	7.197000	0.357373	7.280333	0.647399	7.280333	0.647399
32	presto/tpcds: q33	12.731333	0.409621	12.671000	0.229653	12.671000	0.229653
33	presto/tpcds: q34	7.407500	0.231283	7.227667	0.448243	7.227667	0.448243
34	presto/tpcds: q35	9.652833	0.375233	10.112833	0.315075	10.112833	0.315075
35	presto/tpcds: q36	11.201333	0.266523	10.790333	0.147294	10.790333	0.147294
36	presto/tpcds: q37	5.759167	1.223504	5.141333	0.459783	5.141333	0.459783
37	presto/tpcds: q38	19.515333	0.121485	19.468333	0.925425	19.468333	0.925425

	query	rank before mean	rank before std.dev	rank after mean	rank after std.dev	rank after mean	rank after std.dev
38	presto/tpcds: q39	5.993833	0.133069	5.902667	0.112871	5.902667	0.112871
39	presto/tpcds: q40	18.572000	1.123982	17.646000	0.302651	17.646000	0.302651
40	presto/tpcds: q41	0.831667	0.073785	0.844333	0.061986	0.844333	0.061986
41	presto/tpcds: q42	8.489000	0.187653	8.323333	0.177423	8.323333	0.177423
42	presto/tpcds: q43	12.943833	0.965030	12.196167	0.134332	12.196167	0.134332
43	presto/tpcds: q44	17.747500	0.401116	16.888000	0.537546	16.888000	0.537546
44	presto/tpcds: q45	2.984000	0.203779	3.414500	0.748796	3.414500	0.748796
45	presto/tpcds: q46	11.502500	0.415753	11.277167	0.452799	11.277167	0.452799
46	presto/tpcds: q47	12.156833	0.998473	13.185500	1.292785	13.185500	1.292785
47	presto/tpcds: q48	20.375167	0.395350	19.690000	0.188056	19.690000	0.188056
48	presto/tpcds: q49	17.778500	0.215221	17.457667	0.164908	17.457667	0.164908
49	presto/tpcds: q50	27.406000	0.389913	28.068000	0.409852	28.068000	0.409852
50	presto/tpcds: q51	28.999833	0.815563	28.769833	0.348243	28.769833	0.348243
51	presto/tpcds: q52	8.329333	0.386817	8.223500	0.287789	8.223500	0.287789
52	presto/tpcds: q53	9.154167	0.287731	9.095333	0.212180	9.095333	0.212180
53	presto/tpcds: q54	19.699167	0.854808	19.807667	0.990464	19.807667	0.990464
54	presto/tpcds: q55	8.312167	0.377900	8.013167	0.526477	8.013167	0.526477
55	presto/tpcds: q56	12.701833	0.297824	12.917167	0.306703	12.917167	0.306703
56	presto/tpcds: q57	13.412500	0.189227	13.254833	0.222032	13.254833	0.222032

	query	rank before mean	rank before std.dev	rank after mean	rank after std.dev	rank after mean	rank after std.dev
57	presto/tpcds: q58	12.393667	0.383130	12.324500	0.441965	12.324500	0.441965
58	presto/tpcds: q59	57.958167	0.450147	59.468167	0.909080	59.468167	0.909080
59	presto/tpcds: q60	13.519000	0.470546	13.133000	0.466885	13.133000	0.466885
60	presto/tpcds: q61	18.058167	0.193848	17.941333	0.091993	17.941333	0.091993
61	presto/tpcds: q62	6.603667	0.189936	6.416500	0.153839	6.416500	0.153839
62	presto/tpcds: q63	9.201167	0.289852	9.118667	0.176165	9.118667	0.176165
63	presto/tpcds: q64	59.966167	2.666612	59.961333	2.203671	59.961333	2.203671
64	presto/tpcds: q65	40.629167	1.430643	39.986000	1.544997	39.986000	1.544997
65	presto/tpcds: q66	8.407833	0.149497	8.373833	0.217860	8.373833	0.217860
66	presto/tpcds: q67	76.017833	2.458252	14.541833	0.352965	14.541833	0.352965
67	presto/tpcds: q68	13.905833	0.366017	13.460500	0.203617	13.460500	0.203617
68	presto/tpcds: q69	8.927333	0.245722	9.084167	0.277333	9.084167	0.277333
69	presto/tpcds: q70	35.931167	0.870985	35.644833	0.700408	35.644833	0.700408
70	presto/tpcds: q71	14.197167	0.304332	14.162333	0.205039	14.162333	0.205039
71	presto/tpcds: q72	36.351333	0.471262	36.853500	1.161918	36.853500	1.161918
72	presto/tpcds: q73	7.103333	0.297411	7.156000	0.239755	7.156000	0.239755
73	presto/tpcds: q74	11.994000	0.229931	12.030167	0.174246	12.030167	0.174246
74	presto/tpcds: q75	98.917333	2.614413	96.816833	2.825317	96.816833	2.825317
75	presto/tpcds: q76	10.815833	0.412747	11.158167	0.316663	11.158167	0.316663

	query	rank before mean	rank before std.dev	rank after mean	rank after std.dev	rank after mean	rank after std.dev
76	presto/tpcds: q77	15.620500	0.146652	15.539667	0.300811	15.539667	0.300811
77	presto/tpcds: q78	39.957833	1.849574	39.852167	2.087121	39.852167	2.087121
78	presto/tpcds: q79	13.422667	0.766095	12.836000	0.158758	12.836000	0.158758
79	presto/tpcds: q80	24.734000	1.235577	24.516333	1.082957	24.516333	1.082957
80	presto/tpcds: q81	3.909500	0.083930	3.882667	0.115768	3.882667	0.115768
81	presto/tpcds: q82	8.177667	0.870876	8.205500	0.687361	8.205500	0.687361
82	presto/tpcds: q83	2.058000	0.110848	2.250333	0.196192	2.250333	0.196192
83	presto/tpcds: q84	1.988500	0.055745	2.060167	0.160837	2.060167	0.160837
84	presto/tpcds: q85	10.158500	0.338582	10.430833	0.085808	10.430833	0.085808
85	presto/tpcds: q86	5.182000	0.052824	5.240333	0.338685	5.240333	0.338685
86	presto/tpcds: q87	19.476000	0.282014	19.368667	0.103419	19.368667	0.103419
87	presto/tpcds: q88	12.268333	0.328429	12.125000	0.190044	12.125000	0.190044
88	presto/tpcds: q89	11.517333	0.132107	11.482167	0.181330	11.482167	0.181330
89	presto/tpcds: q90	3.680000	0.285693	3.792833	0.213625	3.792833	0.213625
90	presto/tpcds: q91	1.620000	0.113201	1.558833	0.075523	1.558833	0.075523
91	presto/tpcds: q92	4.434500	0.226238	4.663500	0.239714	4.663500	0.239714
92	presto/tpcds: q93	33.115000	0.589213	32.051667	0.443063	32.051667	0.443063
93	presto/tpcds: q94	9.313000	1.352201	9.480000	0.924784	9.480000	0.924784
94	presto/tpcds: q95	14.136167	0.224627	14.192000	0.545593	14.192000	0.545593

	query	rank before mean	rank before std.dev	rank after mean	rank after std.dev	rank after mean	rank after std.dev
95	presto/tpcds: q96	5.386833	0.247402	5.332500	0.078879	5.332500	0.078879
96	presto/tpcds: q97	30.505333	3.055926	30.169500	2.174444	30.169500	2.174444
97	presto/tpcds: q98	9.461667	0.402191	9.258167	0.958732	9.258167	0.958732
98	presto/tpcds: q99	9.673333	0.130936	10.033167	0.248616	10.033167	0.248616

TPC-H Comparison (CPU)

```

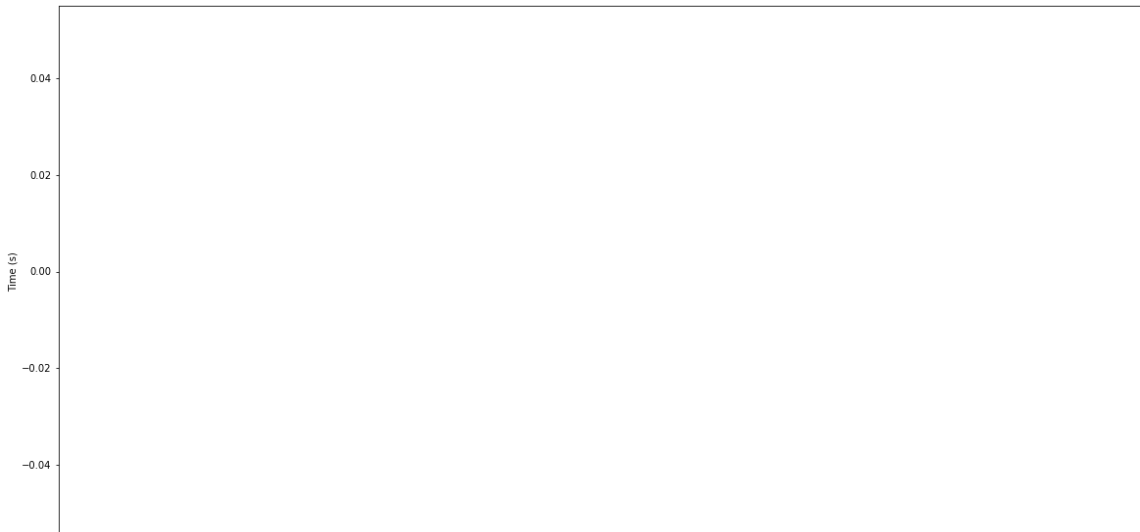
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IndexError                                Traceback (most recent call
last)
<ipython-input-97-9f5fbcbaeaa9> in <module>()
----> 1 compare_benchmark_runs(benchmarks, benchmark='%tpch', query
='q0%', metric='prestoQuery-totalCpuTime')

<ipython-input-87-e77f6193a9c1> in compare_benchmark_runs(benchmark
s, benchmark, query, env_name, metric)
    166     query_labels=[key.split(':')[1].strip() for key in all_k
keys]
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    170     for rect in rects:

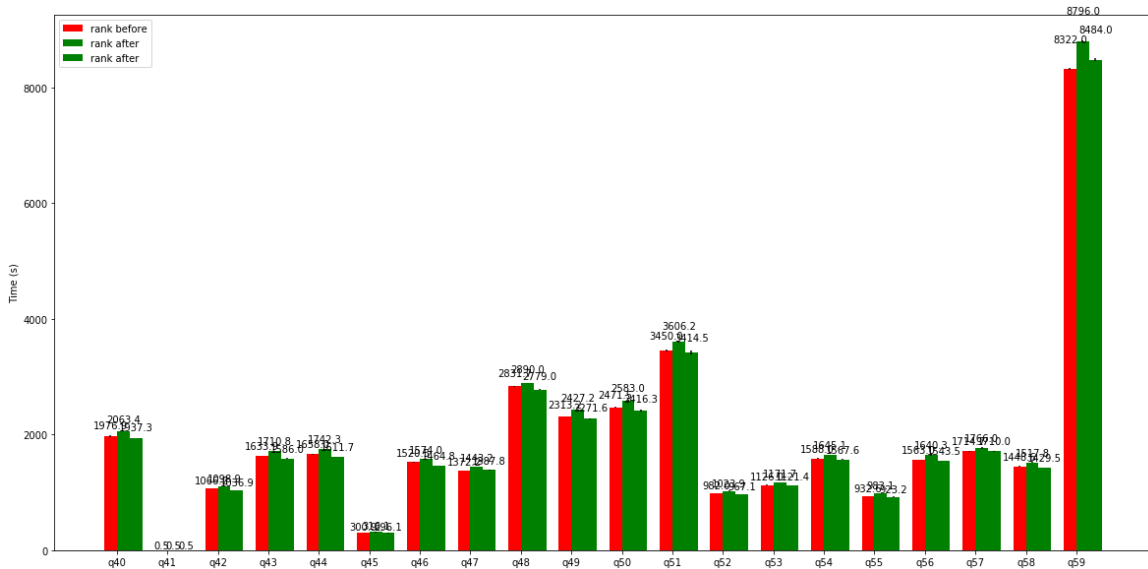
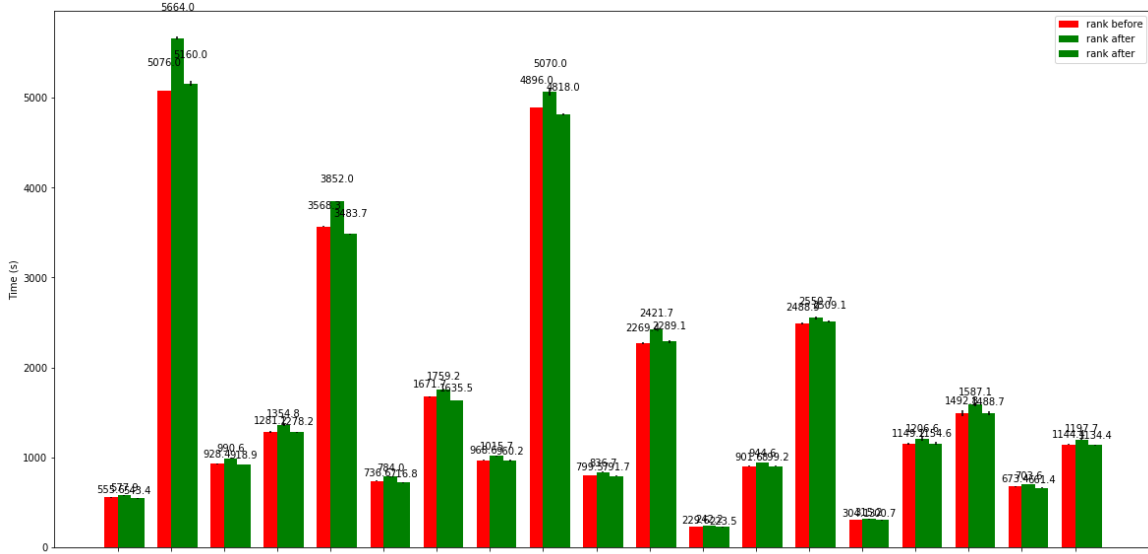
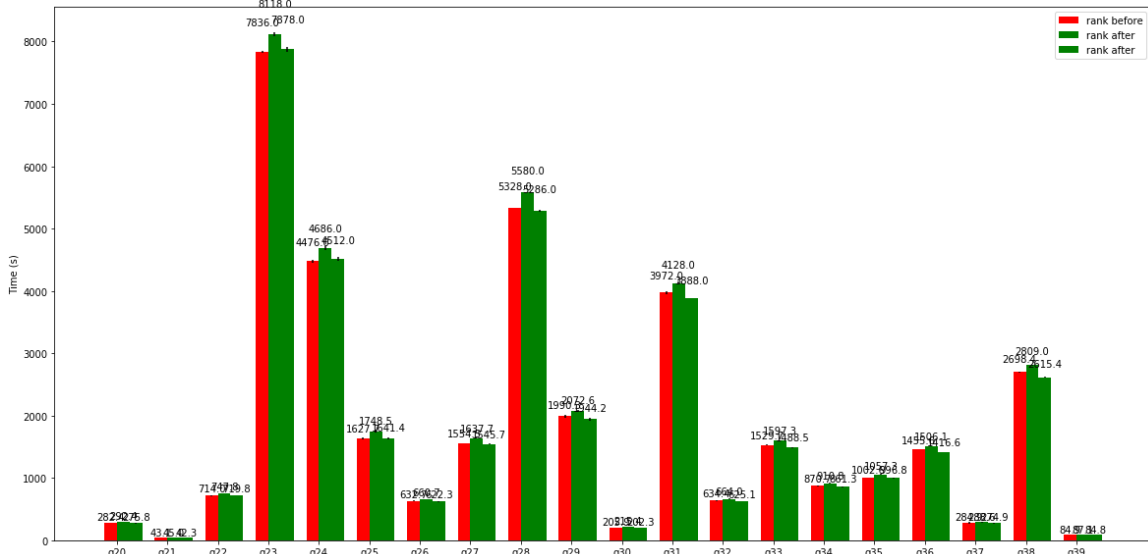
<ipython-input-87-e77f6193a9c1> in <listcomp>(.0)
    166     query_labels=[key.split(':')[1].strip() for key in all_k
keys]
    167     ax.set_xticklabels(query_labels)
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    169
    170     for rect in rects:

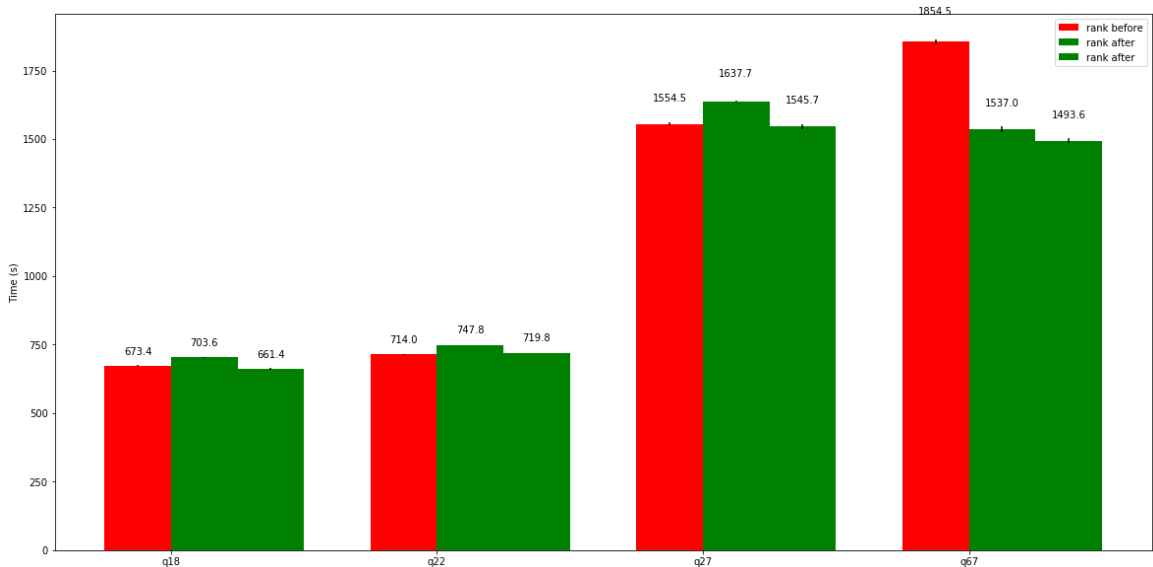
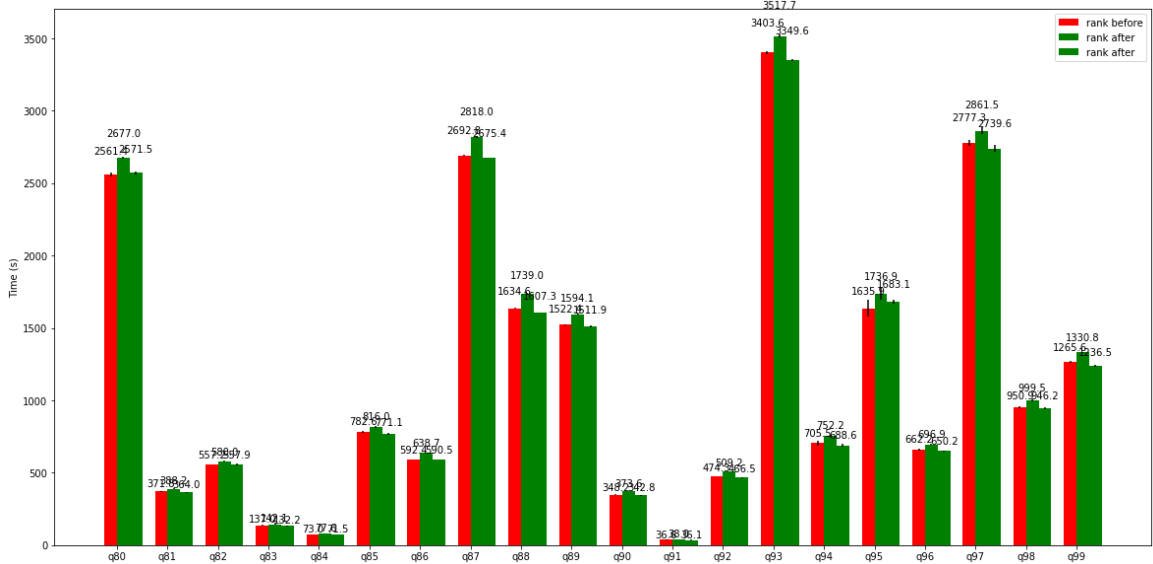
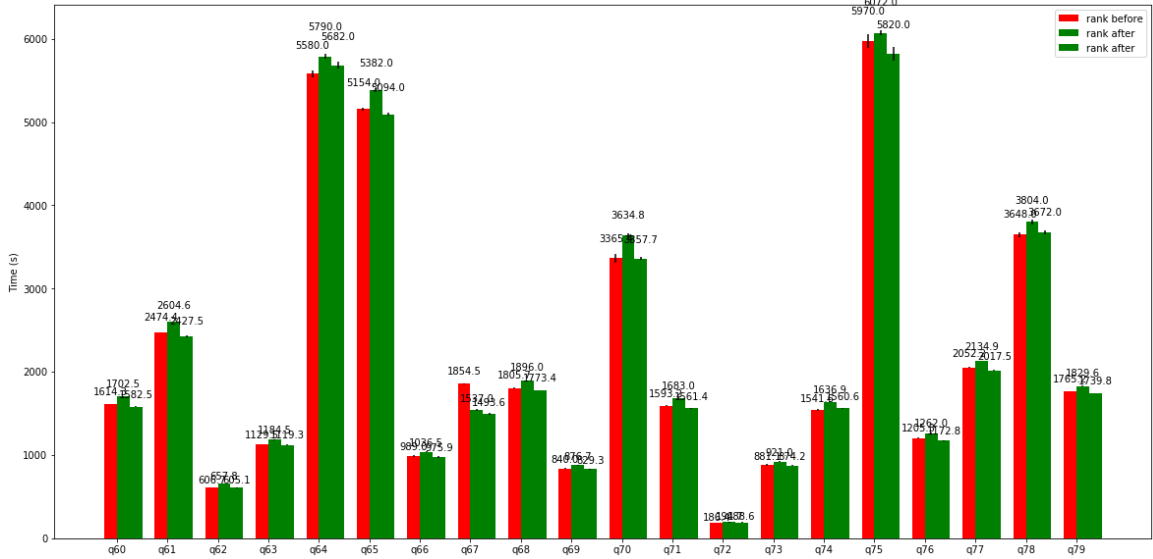
```

IndexError: tuple index out of range



TPC-DS Comparison (CPU)





	query	rank before mean	rank before std.dev	rank after mean	rank after std.dev	rank after mean	rank after std.dev
0	presto/tpcds: q01	555.600000	5.704735	543.400	5.624233	543.400	5.624233
1	presto/tpcds: q02	5076.000000	0.000000	5160.000	29.393877	5160.000	29.393877
2	presto/tpcds: q03	928.400000	5.862423	918.900	3.883813	918.900	3.883813
3	presto/tpcds: q04	1281.200000	6.837543	1278.200	3.973915	1278.200	3.973915
4	presto/tpcds: q05	3568.300000	5.412208	3483.700	3.138790	3483.700	3.138790
5	presto/tpcds: q06	736.600000	8.658868	716.800	6.447325	716.800	6.447325
6	presto/tpcds: q07	1671.700000	2.226208	1635.500	2.092845	1635.500	2.092845
7	presto/tpcds: q08	968.600000	6.900435	960.200	11.445174	960.200	11.445174
8	presto/tpcds: q09	4896.000000	0.000000	4818.000	14.696938	4818.000	14.696938
9	presto/tpcds: q10	799.500000	2.649528	791.700	4.404997	791.700	4.404997
10	presto/tpcds: q11	2269.400000	8.774509	2289.100	14.321871	2289.100	14.321871
11	presto/tpcds: q12	229.600000	1.682855	223.500	1.849324	223.500	1.849324
12	presto/tpcds: q13	901.600000	4.253939	899.200	4.452415	899.200	4.452415
13	presto/tpcds: q14	2488.900000	9.670367	2509.100	11.456177	2509.100	11.456177
14	presto/tpcds: q15	304.100000	2.949576	300.700	4.544447	300.700	4.544447
15	presto/tpcds: q16	1149.200000	9.746384	1154.600	14.695305	1154.600	14.695305
16	presto/tpcds: q17	1492.800000	32.457726	1488.700	19.043424	1488.700	19.043424
17	presto/tpcds: q18	673.400000	1.296148	661.400	2.201817	661.400	2.201817
18	presto/tpcds: q19	1144.400000	4.098780	1134.400	3.613309	1134.400	3.613309

	query	rank before mean	rank before std.dev	rank after mean	rank after std.dev	rank after mean	rank after std.dev
19	presto/tpcds: q20	282.400000	3.322650	275.800	3.692154	275.800	3.692154
20	presto/tpcds: q21	43.135000	0.186628	42.255	0.392619	42.255	0.392619
21	presto/tpcds: q22	714.000000	1.609969	719.800	0.819756	719.800	0.819756
22	presto/tpcds: q23	7836.000000	18.590320	7878.000	42.085627	7878.000	42.085627
23	presto/tpcds: q24	4476.000000	18.590320	4512.000	29.393877	4512.000	29.393877
24	presto/tpcds: q25	1627.700000	15.730607	1641.400	15.795696	1641.400	15.795696
25	presto/tpcds: q26	632.700000	3.388805	622.300	3.802631	622.300	3.802631
26	presto/tpcds: q27	1554.500000	4.939231	1545.700	8.943154	1545.700	8.943154
27	presto/tpcds: q28	5328.000000	0.000000	5286.000	14.696938	5286.000	14.696938
28	presto/tpcds: q29	1990.300000	25.479639	1944.200	26.456304	1944.200	26.456304
29	presto/tpcds: q30	205.900000	2.160555	202.300	1.389964	202.300	1.389964
30	presto/tpcds: q31	3972.000000	18.590320	3888.000	0.000000	3888.000	0.000000
31	presto/tpcds: q32	634.400000	3.408225	625.100	3.764572	625.100	3.764572
32	presto/tpcds: q33	1529.700000	5.984981	1488.500	6.750111	1488.500	6.750111
33	presto/tpcds: q34	870.700000	7.715698	861.300	8.508584	861.300	8.508584
34	presto/tpcds: q35	1002.600000	5.525215	996.800	4.779958	996.800	4.779958
35	presto/tpcds: q36	1455.600000	2.709982	1416.600	3.679130	1416.600	3.679130
36	presto/tpcds: q37	284.900000	18.595806	274.900	3.726124	274.900	3.726124
37	presto/tpcds: q38	2698.400000	11.675616	2615.400	12.430286	2615.400	12.430286

	query	rank before mean	rank before std.dev	rank after mean	rank after std.dev	rank after mean	rank after std.dev
38	presto/tpcds: q39	84.900000	0.501996	84.800	0.726636	84.800	0.726636
39	presto/tpcds: q40	1976.900000	14.516611	1937.300	4.745946	1937.300	4.745946
40	presto/tpcds: q41	0.471833	0.012859	0.474	0.014778	0.474	0.014778
41	presto/tpcds: q42	1066.200000	3.372833	1036.900	3.821518	1036.900	3.821518
42	presto/tpcds: q43	1633.900000	2.925064	1586.000	6.536054	1586.000	6.536054
43	presto/tpcds: q44	1658.000000	10.870879	1611.700	4.791242	1611.700	4.791242
44	presto/tpcds: q45	300.900000	2.908608	296.100	3.146427	296.100	3.146427
45	presto/tpcds: q46	1520.500000	4.111934	1464.800	2.507588	1464.800	2.507588
46	presto/tpcds: q47	1372.200000	3.737379	1387.800	6.361132	1387.800	6.361132
47	presto/tpcds: q48	2831.700000	2.933258	2779.000	3.003997	2779.000	3.003997
48	presto/tpcds: q49	2313.200000	4.986381	2271.600	3.794733	2271.600	3.794733
49	presto/tpcds: q50	2471.500000	12.038438	2416.300	14.124447	2416.300	14.124447
50	presto/tpcds: q51	3450.000000	21.573317	3414.500	30.529134	3414.500	30.529134
51	presto/tpcds: q52	982.000000	2.931211	967.100	6.566277	967.100	6.566277
52	presto/tpcds: q53	1126.000000	4.942874	1121.400	1.258571	1121.400	1.258571
53	presto/tpcds: q54	1588.000000	3.512264	1567.600	7.902405	1567.600	7.902405
54	presto/tpcds: q55	932.600000	3.279024	923.200	5.321654	923.200	5.321654
55	presto/tpcds: q56	1563.000000	3.011976	1543.500	6.008993	1543.500	6.008993
56	presto/tpcds: q57	1714.700000	7.174120	1710.000	4.663046	1710.000	4.663046

	query	rank before mean	rank before std.dev	rank after mean	rank after std.dev	rank after mean	rank after std.dev
57	presto/tpcds: q58	1448.600000	4.185690	1429.500	3.732559	1429.500	3.732559
58	presto/tpcds: q59	8322.000000	14.696938	8484.000	18.590320	8484.000	18.590320
59	presto/tpcds: q60	1614.300000	2.392488	1582.500	8.406426	1582.500	8.406426
60	presto/tpcds: q61	2474.400000	3.906917	2427.500	11.208390	2427.500	11.208390
61	presto/tpcds: q62	606.700000	1.950385	605.100	1.643168	605.100	1.643168
62	presto/tpcds: q63	1129.500000	4.047221	1119.300	4.437567	1119.300	4.437567
63	presto/tpcds: q64	5580.000000	39.436024	5682.000	42.085627	5682.000	42.085627
64	presto/tpcds: q65	5154.000000	14.696938	5094.000	19.718012	5094.000	19.718012
65	presto/tpcds: q66	989.000000	8.250091	975.900	8.634582	975.900	8.634582
66	presto/tpcds: q67	1854.500000	8.648468	1493.600	8.232618	1493.600	8.232618
67	presto/tpcds: q68	1805.700000	1.925617	1773.400	1.884675	1773.400	1.884675
68	presto/tpcds: q69	840.000000	3.698648	829.300	3.115766	829.300	3.115766
69	presto/tpcds: q70	3365.400000	53.578354	3357.700	18.811380	3357.700	18.811380
70	presto/tpcds: q71	1593.200000	5.983979	1561.400	4.854688	1561.400	4.854688
71	presto/tpcds: q72	186.400000	2.931211	188.600	3.730952	188.600	3.730952
72	presto/tpcds: q73	881.100000	8.207070	874.200	3.011976	874.200	3.011976
73	presto/tpcds: q74	1541.600000	8.082574	1560.600	3.129217	1560.600	3.129217
74	presto/tpcds: q75	5970.000000	80.229670	5820.000	81.033326	5820.000	81.033326
75	presto/tpcds: q76	1205.300000	4.480625	1172.800	3.633180	1172.800	3.633180

	query	rank before mean	rank before std.dev	rank after mean	rank after std.dev	rank after mean	rank after std.dev
76	presto/tpcds: q77	2052.200000	3.882267	2017.500	4.900204	2017.500	4.900204
77	presto/tpcds: q78	3648.000000	29.393877	3672.000	22.768399	3672.000	22.768399
78	presto/tpcds: q79	1765.200000	1.859032	1739.800	1.453272	1739.800	1.453272
79	presto/tpcds: q80	2561.400000	14.954330	2571.500	8.531120	2571.500	8.531120
80	presto/tpcds: q81	371.800000	2.727636	364.000	3.344249	364.000	3.344249
81	presto/tpcds: q82	557.200000	2.478709	557.900	7.391617	557.900	7.391617
82	presto/tpcds: q83	137.000000	2.856571	132.200	2.619924	132.200	2.619924
83	presto/tpcds: q84	73.000000	0.309839	71.500	0.589915	71.500	0.589915
84	presto/tpcds: q85	782.600000	4.688710	771.100	6.566277	771.100	6.566277
85	presto/tpcds: q86	592.400000	1.549193	590.500	2.022869	590.500	2.022869
86	presto/tpcds: q87	2692.800000	4.104632	2675.400	1.314534	2675.400	1.314534
87	presto/tpcds: q88	1634.600000	2.979933	1607.300	1.836301	1607.300	1.836301
88	presto/tpcds: q89	1522.400000	3.300909	1511.900	4.076763	1511.900	4.076763
89	presto/tpcds: q90	348.200000	4.287657	342.800	3.769350	342.800	3.769350
90	presto/tpcds: q91	36.566667	0.929789	36.085	0.691889	36.085	0.691889
91	presto/tpcds: q92	474.300000	1.728583	466.500	3.123460	466.500	3.123460
92	presto/tpcds: q93	3403.600000	10.527678	3349.600	5.321654	3349.600	5.321654
93	presto/tpcds: q94	705.500000	18.397282	688.600	8.953212	688.600	8.953212
94	presto/tpcds: q95	1635.900000	56.353704	1683.100	12.020483	1683.100	12.020483

	query	rank before mean	rank before std.dev	rank after mean	rank after std.dev	rank after mean	rank after std.dev
95	presto/tpcds: q96	662.200000	6.323290	650.200	2.701111	650.200	2.701111
96	presto/tpcds: q97	2777.300000	20.270471	2739.600	24.086843	2739.600	24.086843
97	presto/tpcds: q98	950.900000	6.739436	946.200	4.769906	946.200	4.769906
98	presto/tpcds: q99	1265.600000	5.923512	1236.500	6.388427	1236.500	6.388427