

Distribution of Parameters for Generated SQL Queries on the TPC-H Database

Scenario: 1-3jp_rjpp__g__h0-3ss_h0-3nss

Scale factor: 10 GB

The 1000-query pack was generated on: 2023-11-06

First column ('Query parameter or value') displays either:

- a parameter name, or

- a value of the current parameter (only for low-cardinality parameters).

Second column ('Descriptive statistics') displays:

- for low cardinality parameters: frequency and proportion from total (of 1000 queries)

- for higher cardinality parameters: [min, median, max] mean / SD

| Query parameter or value | Descriptive statistics |
|----------------------------------|------------------------|
| SELECT_n_of_columns | [1, 7, 100] 10 / 13 |
| SELECT_n_of_non_aggr_func__UPPER | |
| 0 | 697 (70%) |
| 1 | 231 (23%) |
| 2 | 60 (6.0%) |
| 3 | 9 (0.9%) |
| 4 | 2 (0.2%) |
| 6 | 1 (0.1%) |
| SELECT_n_of_non_aggr_func__LOWER | |
| 0 | 699 (70%) |
| 1 | 226 (23%) |
| 2 | 58 (5.8%) |
| 3 | 11 (1.1%) |
| 4 | 1 (0.1%) |
| 5 | 2 (0.2%) |

| Query parameter or value | Descriptive statistics |
|-----------------------------------|------------------------|
| 6 | 3 (0.3%) |
| SELECT_n_of_non_aggr_func__LTRIM | |
| 0 | 688 (69%) |
| 1 | 249 (25%) |
| 2 | 46 (4.6%) |
| 3 | 12 (1.2%) |
| 4 | 4 (0.4%) |
| 5 | 1 (0.1%) |
| SELECT_n_of_non_aggr_func__SUBSTR | |
| 0 | 687 (69%) |
| 1 | 231 (23%) |
| 2 | 61 (6.1%) |
| 3 | 16 (1.6%) |
| 4 | 2 (0.2%) |
| 5 | 2 (0.2%) |
| 6 | 1 (0.1%) |
| SELECT_n_of_non_aggr_func__DAY | |
| 0 | 919 (92%) |
| 1 | 63 (6.3%) |
| 2 | 12 (1.2%) |
| 3 | 5 (0.5%) |
| 4 | 1 (0.1%) |
| SELECT_n_of_non_aggr_func__MONTH | |
| 0 | 855 (86%) |
| 1 | 101 (10%) |
| 2 | 31 (3.1%) |
| 3 | 9 (0.9%) |
| 4 | 3 (0.3%) |
| 5 | 1 (0.1%) |
| SELECT_n_of_non_aggr_func__ROUND | |
| 0 | 956 (96%) |
| 1 | 41 (4.1%) |
| 2 | 3 (0.3%) |
| SELECT_n_of_non_aggr_func__TRUNC | |
| 0 | 937 (94%) |
| 1 | 56 (5.6%) |
| 2 | 6 (0.6%) |
| 3 | 1 (0.1%) |
| SELECT_n_of_non_aggr_func__YEAR | |
| 0 | 868 (87%) |
| 1 | 102 (10%) |
| 2 | 23 (2.3%) |
| 3 | 7 (0.7%) |
| SELECT_n_of_non_aggr_func__RTRIM | |
| 0 | 702 (70%) |
| 1 | 229 (23%) |

| Query parameter or value | Descriptive statistics |
|--|---------------------------------|
| 2 | 52 (5.2%) |
| 3 | 15 (1.5%) |
| 4 | 2 (0.2%) |
| SELECT_n_of_non_aggr_func___SQRT | |
| 0 | 847 (85%) |
| 1 | 124 (12%) |
| 2 | 16 (1.6%) |
| 3 | 9 (0.9%) |
| 4 | 3 (0.3%) |
| 5 | 1 (0.1%) |
| SELECT_n_of_non_aggr_func___LOG | |
| 0 | 894 (89%) |
| 1 | 92 (9.2%) |
| 2 | 12 (1.2%) |
| 3 | 1 (0.1%) |
| 7 | 1 (0.1%) |
| SELECT_n_of_non_aggr_func___DOW | |
| 0 | 887 (89%) |
| 1 | 90 (9.0%) |
| 2 | 15 (1.5%) |
| 3 | 8 (0.8%) |
| SELECT_n_of_non_aggr_func___FLOOR | |
| 0 | 942 (94%) |
| 1 | 55 (5.5%) |
| 2 | 3 (0.3%) |
| SELECT_n_of_non_aggr_func___ABS | |
| 0 | 942 (94%) |
| 1 | 53 (5.3%) |
| 2 | 3 (0.3%) |
| 3 | 2 (0.2%) |
| SELECT_n_of_all_non_aggr_func | [0.0, 2.0, 46.0] 3.2 / 4.2 |
| SELECT_n_of_aggr_func___MAX | [0.00, 0.00, 9.00] 0.66 / 1.49 |
| SELECT_n_of_aggr_func___COUNT | [0.00, 0.00, 10.00] 0.66 / 1.48 |
| SELECT_n_of_aggr_func___MIN | |
| 0 | 771 (77%) |
| 1 | 78 (7.8%) |
| 2 | 51 (5.1%) |
| 3 | 36 (3.6%) |
| 4 | 25 (2.5%) |
| 5 | 18 (1.8%) |
| 6 | 12 (1.2%) |
| 7 | 7 (0.7%) |
| 8 | 2 (0.2%) |
| SELECT_n_of_aggr_func___COUNT_DISTINCT | [0.00, 0.00, 11.00] 0.65 / 1.50 |
| SELECT_n_of_aggr_func___SUM | |
| 0 | 948 (95%) |

| Query parameter or value | Descriptive statistics |
|--------------------------------|--|
| 1 | 33 (3.3%) |
| 2 | 14 (1.4%) |
| 3 | 4 (0.4%) |
| 4 | 1 (0.1%) |
| SELECT__n_of__aggr_func__AVG | |
| 0 | 950 (95%) |
| 1 | 40 (4.0%) |
| 2 | 7 (0.7%) |
| 3 | 3 (0.3%) |
| SELECT__n_of__all__aggr_func | [0.00, 2.00, 11.00] 2.72 / 2.32 |
| FROM__n_of__join_paths | |
| 1 | 341 (34%) |
| 2 | 332 (33%) |
| 3 | 327 (33%) |
| FROM__n_of__super_joins__RIGHT | |
| 0 | 741 (74%) |
| 1 | 239 (24%) |
| 2 | 20 (2.0%) |
| FROM__n_of__super_joins__FULL | |
| 0 | 786 (79%) |
| 1 | 198 (20%) |
| 2 | 16 (1.6%) |
| FROM__n_of__super_joins__LEFT | |
| 0 | 774 (77%) |
| 1 | 199 (20%) |
| 2 | 27 (2.7%) |
| FROM__n_of__joins__INNER | |
| 0 | 241 (24%) |
| 1 | 233 (23%) |
| 2 | 237 (24%) |
| 3 | 145 (15%) |
| 4 | 91 (9.1%) |
| 5 | 31 (3.1%) |
| 6 | 17 (1.7%) |
| 7 | 5 (0.5%) |
| FROM__n_of__joins__RIGHT | |
| 0 | 235 (24%) |
| 1 | 265 (27%) |
| 2 | 227 (23%) |
| 3 | 132 (13%) |
| 4 | 79 (7.9%) |
| 5 | 32 (3.2%) |
| 6 | 21 (2.1%) |
| 7 | 7 (0.7%) |
| 8 | 2 (0.2%) |
| FROM__n_of__processed_rows | [5, 68,079,156, 229,441,529] 64,945,691 / 59,848,394 |

| Query parameter or value | Descriptive statistics |
|---|---------------------------------|
| WHERE_n_of_predicates | [0.00, 2.00, 10.00] 2.67 / 2.14 |
| WHERE_n_of_attribs_of_type__character | |
| 0 | 728 (73%) |
| 1 | 231 (23%) |
| 2 | 31 (3.1%) |
| 3 | 8 (0.8%) |
| 4 | 1 (0.1%) |
| 5 | 1 (0.1%) |
| WHERE_n_of_attribs_of_type__character_varying | |
| 0 | 472 (47%) |
| 1 | 296 (30%) |
| 2 | 163 (16%) |
| 3 | 49 (4.9%) |
| 4 | 17 (1.7%) |
| 5 | 2 (0.2%) |
| 6 | 1 (0.1%) |
| WHERE_n_of_attribs_of_type__integer | |
| 0 | 469 (47%) |
| 1 | 315 (32%) |
| 2 | 151 (15%) |
| 3 | 48 (4.8%) |
| 4 | 14 (1.4%) |
| 5 | 2 (0.2%) |
| 6 | 1 (0.1%) |
| WHERE_n_of_attribs_of_type__date | |
| 0 | 835 (84%) |
| 1 | 154 (15%) |
| 2 | 11 (1.1%) |
| WHERE_n_of_attribs_of_type__numeric | |
| 0 | 651 (65%) |
| 1 | 244 (24%) |
| 2 | 83 (8.3%) |
| 3 | 18 (1.8%) |
| 4 | 4 (0.4%) |
| WHERE_n_of_pkey_attribs | |
| 0 | 639 (64%) |
| 1 | 272 (27%) |
| 2 | 71 (7.1%) |
| 3 | 16 (1.6%) |
| 4 | 2 (0.2%) |
| WHERE_n_of_connect_OR | |
| 0 | 478 (48%) |
| 1 | 179 (18%) |
| 2 | 141 (14%) |
| 3 | 91 (9.1%) |
| 4 | 55 (5.5%) |

| Query parameter or value | Descriptive statistics |
|---------------------------------------|------------------------|
| 5 | 36 (3.6%) |
| 6 | 17 (1.7%) |
| 7 | 3 (0.3%) |
| WHERE_n_of_operators__between | |
| 0 | 621 (62%) |
| 1 | 279 (28%) |
| 2 | 83 (8.3%) |
| 3 | 14 (1.4%) |
| 4 | 3 (0.3%) |
| WHERE_n_of_operators__greater_or_less | |
| 0 | 441 (44%) |
| 1 | 303 (30%) |
| 2 | 154 (15%) |
| 3 | 74 (7.4%) |
| 4 | 21 (2.1%) |
| 5 | 4 (0.4%) |
| 6 | 3 (0.3%) |
| WHERE_n_of_operators__in | |
| 0 | 615 (62%) |
| 1 | 278 (28%) |
| 2 | 79 (7.9%) |
| 3 | 21 (2.1%) |
| 4 | 7 (0.7%) |
| WHERE_n_of_operators__like | |
| 0 | 842 (84%) |
| 1 | 143 (14%) |
| 2 | 15 (1.5%) |
| WHERE_n_of_non_aggr_func__SQRT | |
| 0 | 904 (90%) |
| 1 | 92 (9.2%) |
| 2 | 4 (0.4%) |
| WHERE_n_of_non_aggr_func__DOW | |
| 0 | 975 (98%) |
| 1 | 25 (2.5%) |
| WHERE_n_of_non_aggr_func__MONTH | |
| 0 | 973 (97%) |
| 1 | 27 (2.7%) |
| WHERE_n_of_non_aggr_func__YEAR | |
| 0 | 977 (98%) |
| 1 | 23 (2.3%) |
| WHERE_n_of_non_aggr_func__TRUNC | |
| 0 | 972 (97%) |
| 1 | 27 (2.7%) |
| 2 | 1 (0.1%) |
| WHERE_n_of_non_aggr_func__FLOOR | |
| 0 | 972 (97%) |

| Query parameter or value | Descriptive statistics |
|--|--|
| 1 | 26 (2.6%) |
| 2 | 2 (0.2%) |
| WHERE_n_of_non_aggr_func__ROUND | |
| 0 | 968 (97%) |
| 1 | 32 (3.2%) |
| WHERE_n_of_non_aggr_func__LOG | |
| 0 | 950 (95%) |
| 1 | 49 (4.9%) |
| 2 | 1 (0.1%) |
| WHERE_n_of_non_aggr_func__ABS | |
| 0 | 966 (97%) |
| 1 | 32 (3.2%) |
| 2 | 2 (0.2%) |
| WHERE_n_of_non_aggr_func__DAY | |
| 0 | 977 (98%) |
| 1 | 23 (2.3%) |
| WHERE_n_of_all_non_aggr_func | |
| 0 | 697 (70%) |
| 1 | 241 (24%) |
| 2 | 53 (5.3%) |
| 3 | 7 (0.7%) |
| 4 | 2 (0.2%) |
| GROUP_BY_n_of_columns | [0.00, 2.00, 9.00] 2.29 / 2.07 |
| HAVING_n_of_main_predicates | [0.00, 3.00, 9.00] 3.27 / 2.58 |
| HAVING_n_of_main_predicates__non_scalar_subquery | |
| 0 | 471 (47%) |
| 1 | 161 (16%) |
| 2 | 191 (19%) |
| 3 | 177 (18%) |
| HAVING_n_of_main_predicates__scalar_subquery | |
| 0 | 440 (44%) |
| 1 | 174 (17%) |
| 2 | 215 (22%) |
| 3 | 171 (17%) |
| HAVING_n_of_subqueries__non_scalar_subquery | |
| 0 | 471 (47%) |
| 1 | 161 (16%) |
| 2 | 191 (19%) |
| 3 | 177 (18%) |
| HAVING_n_of_subqueries__scalar_subquery | [0.0, 1.0, 27.0] 2.4 / 3.6 |
| HAVING_n_of_processed_rows_by_subqueries | [0, 33,004,856, 3,050,341,542] 224,383,347 / 406,390,526 |
| ORDER_BY_n_of_columns | |
| 0 | 297 (30%) |
| 1 | 376 (38%) |
| 2 | 234 (23%) |

| Query parameter or value | Descriptive statistics |
|--------------------------|-------------------------|
| 3 | 72 (7.2%) |
| 4 | 9 (0.9%) |
| 5 | 9 (0.9%) |
| 6 | 1 (0.1%) |
| 7 | 1 (0.1%) |
| 8 | 1 (0.1%) |
| limit | [1, 486, 999] 493 / 286 |
| offset | [0, 26, 998] 257 / 324 |