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

```
## Scenario: 1-3jp_ujjp__g_h0-3ss_h0nss

## Scale factor: 50 GB

## The 1000-query pack was generated on: 2023-11-09

## 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)
```

| Query parameter or value | Descriptive statistics |
|--------------------------------|------------------------|
| SELECT_n_of_columns | [1, 6, 92] 9 / 12 |
| SELECT_n_of_non_aggr_funcABS | |
| 0 | 939 (94%) |
| 1 | 56 (5.6%) |
| 2 | 5 (0.5%) |
| SELECT_n_of_non_aggr_funcROUND | , |
| 0 | 938 (94%) |
| 1 | 55 (5.5%) |
| 2 | 6 (0.6%) |
| 5 | 1 (0.1%) |
| SELECT_n_of_non_aggr_funcRTRIM | • |
| 0 | 716~(72%) |
| 1 | 211 (21%) |
| 2 | 54 (5.4%) |
| 3 | 14(1.4%) |

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

| Query parameter or value | Descriptive statistics |
|--|------------------------|
| 4 | 4 (0.4%) |
| 6 | 1 (0.1%) |
| $SELECT_n_of_non_aggr_func__SUBSTR$ | |
| 0 | 708 (71%) |
| 1 | $220 \ (22\%)$ |
| 2 | 52 (5.2%) |
| 3 | $10 \ (1.0\%)$ |
| 4 | 7~(0.7%) |
| 5 | 2 (0.2%) |
| 7 | 1 (0.1%) |
| SELECT_n_of_non_aggr_funcTRUNC | 4 |
| 0 | 952 (95%) |
| 1 | 43 (4.3%) |
| | 5~(0.5%) |
| SELECT_n_of_non_aggr_funcUPPER | 000 (000) |
| 0 | 680 (68%) |
| 1 | 243 (24%) |
| 2 | 56 (5.6%) |
| 3 | 16 (1.6%) |
| 4 | 3 (0.3%) |
| 5 CELECT - of man for DOW | 2~(0.2%) |
| SELECT_n_of_non_aggr_funcDOW | 996 (9007) |
| 0 | 886 (89%) 90 (9.0%) |
| 1 2 | 17 (1.7%) |
| 3 | 3 (0.3%) |
| 4 | 4 (0.4%) |
| SELECT_n_of_non_aggr_funcMONTH | 4 (0.470) |
| 0 | 844 (84%) |
| 1 | 125 (13%) |
| 2 | 17 (1.7%) |
| 3 | 6 (0.6%) |
| 4 | 6 (0.6%) |
| 5 | 1 (0.1%) |
| 6 | 1 (0.1%) |
| SELECT_n_of_non_aggr_funcLOWER | |
| 0 $=$ $=$ $=$ ∞ $=$ ∞ | 697 (70%) |
| 1 | 231 (23%) |
| 2 | 57 (5.7%) |
| 3 | $12\ (1.2\%)$ |
| 4 | 2~(0.2%) |
| 5 | 1 (0.1%) |
| SELECT_n_of_non_aggr_funcDAY | |
| 0 | 911 (91%) |
| 1 | 79 (7.9%) |
| 2 | 6~(0.6%) |

| Query parameter or value | Descriptive statistics |
|-------------------------------------|---|
| 3 | 4 (0.4%) |
| SELECT_n_of_non_aggr_funcLOG | , |
| 0 | 885 (89%) |
| 1 | 101 (10%) |
| 2 | 11 (1.1%) |
| 3 | 2(0.2%) |
| 4 | 1 (0.1%) |
| SELECT_n_of_non_aggr_funcLTRIM | |
| 0 | 696~(70%) |
| 1 | $218\ (22\%)$ |
| 2 | 64 (6.4%) |
| 3 | 14 (1.4%) |
| 4 | 5~(0.5%) |
| 5 | 3~(0.3%) |
| SELECT_n_of_non_aggr_funcYEAR | |
| 0 | 864 (86%) |
| 1 | 105 (11%) |
| 2 | $22\ (2.2\%)$ |
| 3 | 4~(0.4%) |
| 4 | 4~(0.4%) |
| 6 | 1 (0.1%) |
| SELECT_n_of_non_aggr_funcSQRT | |
| θ | 841 (84%) |
| 1 | $130 \ (13\%)$ |
| 2 | 17 (1.7%) |
| 3 | 5~(0.5%) |
| 4 | 6~(0.6%) |
| 7 | 1 (0.1%) |
| SELECT_n_of_non_aggr_funcFLOOR | |
| 0 | $948 \; (95\%)$ |
| 1 | $45 \ (4.5\%)$ |
| 2 | 7 (0.7%) |
| SELECT_n_of_all_non_aggr_func | [0.0, 2.0, 43.0] 3.3/ 4.4 |
| SELECT_n_of_aggr_funcCOUNT_DISTINCT | |
| 0 | 737 (74%) |
| 1 | $94 \ (9.4\%)$ |
| 2 | 60 (6.0%) |
| 3 | $32 \ (3.2\%)$ |
| 4 | 31 (3.1%) |
| 5 | $20 \ (2.0\%)$ |
| 6 | $12\ (1.2\%)$ |
| 7 | $11\ (1.1\%)$ |
| 8 | 3 (0.3%) |
| SELECT_n_of_aggr_funcMIN | [0.00, 0.00, 9.00] 0.65 / 1.49 |
| SELECT_n_of_aggr_funcMAX | $[0.00, 0.00, 10.00] \ 0.65 \ / \ 1.47$ |
| SELECT_n_of_aggr_funcCOUNT | [0.00, 0.00, 9.00] 0.68 / 1.52 |

| Query parameter or value | Descriptive statistics |
|---|---|
| SELECT_n_of_aggr_funcAVG | |
| 0 | $928 \; (93\%)$ |
| 1 | 51 (5.1%) |
| 2 | $14 \ (1.4\%)$ |
| 3 | 7~(0.7%) |
| SELECT_n_of_aggr_funcSUM | |
| 0 | 942 (94%) |
| 1 | 41 (4.1%) |
| 2 | 13 (1.3%) |
| 3 | 3(0.3%) |
| 4 | 1 (0.1%) |
| SELECT_n_of_all_aggr_func FROM_n_of_join_paths | $[0.00, 2.00, 11.00] \ 2.87 \ / \ 2.31$ |
| 1 | 340 (34%) |
| 2 | 343 (34%) |
| 3 | 317 (32%) |
| FROM_n_of_super_joinsRIGHT | |
| 0 | $784 \ (78\%)$ |
| 1 | 201~(20%) |
| 2 | 15~(1.5%) |
| FROM_n_of_super_joinsFULL | |
| 0 | 769 (77%) |
| 1 | 206 (21%) |
| 2 EDOM : I DET | $25 \; (2.5\%)$ |
| FROM_n_of_super_joinsLEFT | 769 (7707) |
| <i>0 1</i> | 768 (77%) 213 (21%) |
| 2 | 19 (1.9%) |
| FROM_n_of_joinsINNER | 19 (1.970) |
| 0 | 246 (25%) |
| 1 | 268 (27%) |
| 2 | 199 (20%) |
| 3 | 162 (16%) |
| | 90 (9.0%) |
| <i>4 5</i> | 21 (2.1%) |
| 6 | 10 (1.0%) |
| 7 | 4(0.4%) |
| FROM_n_of_joinsRIGHT | ` , |
| 0 | 246~(25%) |
| 1 | 288~(29%) |
| 2 | 204 (20%) |
| 3 | 128 (13%) |
| 4 | 77 (7.7%) |
| 5 | 42~(4.2%) |
| 6 | 9 (0.9%) |
| 7 | 4~(0.4%) |

| Query parameter or value | Descriptive statistics |
|--|--|
| 8 | 2 (0.2%) |
| $FROM_n_of_processed_rows$ | [5, 340,241,940, 1,147,549,246] 308,238,294 / 297,261,469 |
| WHERE_n_of_predicates | [0.00, 2.00, 10.00] 2.79/ 2.20 |
| $WHERE_n_of_attribs_of_type__character$ | |
| 0 | $744 \ (74\%)$ |
| 1 | $210\ (21\%)$ |
| 2 | $39 \ (3.9\%)$ |
| 3 | 7 (0.7%) |
| WHERE_n_of_attribs_of_typecharacter_ | |
| 0 | 419 (42%) |
| 1 | 330 (33%) |
| 2 | 171 (17%) |
| 3 | 62 (6.2%) |
| 4 | 14 (1.4%) |
| 5 | 3 (0.3%) |
| | 1 (0.1%) |
| WHERE_n_of_attribs_of_typenumeric | caa (calit) |
| 0 | 632 (63%) |
| 1 | 257 (26%) |
| 2 | 86 (8.6%) |
| 3 | 20 (2.0%) |
| WHERE n of attribu of type data | 5~(0.5%) |
| WHERE_n_of_attribs_of_typedate | 029 (0207) |
| 0 | 832 (83%) |
| 1 | 141 (14%) |
| 2 3 | $\begin{array}{c} 24 \ (2.4\%) \\ 3 \ (0.3\%) \end{array}$ |
| WHERE_n_of_attribs_of_typeinteger | 3(0.370) |
| 0 | 474 (47%) |
| 1 | 303 (30%) |
| 2 | 153 (15%) |
| 3 | 50 (5.0%) |
| 4 | 17 (1.7%) |
| 5 | 2(0.2%) |
| 6 | 1 (0.1%) |
| WHERE_n_of_pkey_attribs | 1 (0.170) |
| 0 | 624~(62%) |
| 1 | 292 (29%) |
| 2 | 67 (6.7%) |
| 3 | 14 (1.4%) |
| 4 | 3~(0.3%) |
| WHERE_n_of_connect_OR | (/ |
| 0 | 465~(47%) |
| 1 | 181 (18%) |
| 2 | 134 (13%) |
| | ` ' |

| 3 93 93 93 93 93 94 95 95 95 96 96 97 96 97 96 97 96 96 | Query parameter or value | Descriptive statistics |
|---|-------------------------------------|---------------------------------------|
| 4 71 (7.1%) 5 31 (3.1%) 6 22 (2.2%) 7 3 (0.3%) WHERE_n_of_operators_in 600 (60%) 1 285 (29%) 2 83 (8.3%) 3 26 (2.0%) 4 6 (0.6%) WHERE_n_of_operators_like 843 (84%) 1 143 (14%) 2 13 (1.3%) 3 1 (0.1%) WHERE_n_of_operators_greater_or_less 432 (43%) 1 297 (30%) 2 162 (16%) 3 72 (7.2%) 4 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operators_between 623 (62%) 1 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operators_between 623 (62%) 1 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_non_aggr_funeTRUNC 958 (96%) 1 90 (9.0%) 1 90 (9.0%) <td>3</td> <td>93 (9.3%)</td> | 3 | 93 (9.3%) |
| 5 | 4 | , , |
| 7 | | 31 (3.1%) |
| WHERE_n_of_operators_in 0 600 (60%) 1 285 (29%) 2 83 (8.3%) 5 26 (2.6%) 4 6 (0.6%) WHERE_n_of_operators_like 0 843 (84%) 1 143 (14%) 2 13 (1.3%) 3 1 (0.1%) WHERE_n_of_operators_greater_or_less 0 432 (43%) 1 297 (30%) 2 162 (16%) 3 72 (7.2%) 4 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operators_between 0 623 (62%) 1 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 (7.4%) 3 20 (2.0%) 4 (1.41%) 2 (0.2%) WHERE_n_of_non_aggr_funcTRUNC 0 958 (96%) 1 1 0.1%) WHERE_n_of_non_aggr_func_SQRT 0 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 0 964 (96%) 1 1 0.1%) WHERE_n_of_non_aggr_func_YEAR 0 964 (96%) 1 34 (3.4%) 2 (0.2%) WHERE_n_of_non_aggr_funcYEAR 0 964 (96%) 1 34 (3.4%) 2 (0.2%) WHERE_n_of_non_aggr_funcYEAR 0 968 (97%) | 6 | $22\ (2.2\%)$ |
| 0 600 (60%) 1 285 (29%) 2 83 (8.3%) 3 26 (2.6%) 4 6 (0.6%) WHERE_n_of_operators_like 843 (84%) 1 143 (14%) 2 13 (1.3%) 3 1 (0.1%) WHERE_n_of_operators_greater_or_less 432 (43%) 1 297 (30%) 2 162 (16%) 3 72 (7.2%) 4 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operators_between 623 (62%) 1 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 2 (0.2%) WHERE_n_of_non_aggr_funcTRUNC 958 (96%) 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_funcSQRT 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 964 (96%) 1 34 (3.4%) 2 2 | γ | $3\ (0.3\%)$ |
| 1 285 (29%) 2 83 (8.3%) 3 26 (2.6%) 4 6 (0.6%) WHERE_n_of_operators_like 0 843 (84%) 1 143 (14%) 2 13 (1.3%) 3 1 (0.1%) WHERE_n_of_operators_greater_or_less 0 432 (43%) 1 297 (30%) 2 162 (16%) 3 72 (7.2%) 4 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operators_between 623 (62%) 1 1 (0.1%) WHERE_n_of_operators_between 623 (62%) 2 74 (7.4%) 3 20 (2.0%) 4 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 41 (4.1%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcSQRT 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_a | WHERE_n_of_operatorsin | |
| 2 83 (8.3%) 3 26 (2.6%) 4 6 (0.6%) WHERE_n_of_operators_like 843 (84%) 1 143 (14%) 2 13 (1.3%) 3 1 (0.1%) WHERE_n_of_operators_greater_or_less 432 (43%) 1 297 (30%) 2 162 (16%) 3 72 (7.2%) 4 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operators_between 6 0 623 (62%) 1 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 2 (0.2%) WHERE_n_of_non_aggr_funcTRUNC 958 (96%) 0 958 (96%) 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_funcSQRT 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 964 (96%) 1 34 (3.4%) 2 (0.2%) WHERE_n_of_non_aggr_funcABS< | 0 | 600 (60%) |
| 3 26 (2.6%) 4 6 (0.6%) WHERE_n_of_operators_like 843 (84%) 1 143 (14%) 2 13 (1.3%) 3 1 (0.1%) WHERE_n_of_operators_greater_or_less 432 (43%) 1 297 (30%) 2 162 (16%) 3 72 (7.2%) 4 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operators_between 623 (62%) 1 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 2 (0.2%) WHERE_n_of_non_aggr_func_TRUNC 58 (96%) 0 958 (96%) 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_func_SQRT 90 (90%) 1 90 (90%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_func_YEAR 964 (96%) 1 34 (3.4%) 2 (0.2%) WHERE_n_of_non_aggr_func_ABS 968 (97%) <td>1</td> <td>285 (29%)</td> | 1 | 285 (29%) |
| WHERE_n_of_operators_like 0 | 2 | 83~(8.3%) |
| WHERE_n_of_operators_like 0 | 3 | 26~(2.6%) |
| 0 843 (84%) t 143 (14%) 2 13 (1.3%) 3 1 (0.1%) WHERE_n_of_operatorsgreater_or_less 0 432 (43%) 1 297 (30%) 2 162 (16%) 3 72 (7.2%) 4 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operatorsbetween 623 (62%) 1 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 2 (0.2%) WHERE_n_of_non_aggr_funcTRUNC 958 (96%) 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_funcSQRT 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 968 (97%) | 4 | 6~(0.6%) |
| 1 143 (14%) 2 13 (1.3%) 3 1 (0.1%) WHERE_n_of_operators_greater_or_less 0 432 (43%) 1 297 (30%) 2 162 (16%) 3 72 (7.2%) 4 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operators_between 623 (62%) 1 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 20 (2.0%) 4 2 (0.2%) WHERE_n_of_non_aggr_func_TRUNC 958 (96%) 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_func_SQRT 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_func_YEAR 964 (96%) 1 34 (3.4%) 2 0.2%) WHERE_n_of_non_aggr_func_ABS 968 (97%) | WHERE_n_of_operatorslike | |
| 2 13 (1.3%) 3 1 (0.1%) WHERE_n_of_operators_greater_or_less 0 432 (43%) 1 297 (30%) 2 162 (16%) 3 72 (7.2%) 4 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operators_between 0 623 (62%) 1 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 2 (0.2%) WHERE_n_of_non_aggr_func_TRUNC 958 (96%) 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_func_SQRT 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_func_YEAR 964 (96%) 1 34 (3.4%) 2 20.2%) WHERE_n_of_non_aggr_func_ABS 968 (97%) | 0 | 843 (84%) |
| 3 1 (0.1%) WHERE_n_of_operators_greater_or_less 432 (43%) 1 297 (30%) 2 162 (16%) 3 72 (7.2%) 4 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operators_between 623 (62%) 1 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 4 (7.4%) 3 20 (2.0%) 4 4 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_func_SQRT 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_func_YEAR 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_func_ABS 968 (97%) | 1 | $143 \ (14\%)$ |
| WHERE_n_of_operatorsgreater_or_less 0 | 2 | |
| 0 432 (43%) 1 297 (30%) 2 162 (16%) 3 72 (7.2%) 4 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operators_between 623 (62%) 1 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 2 (0.2%) WHERE_n_of_non_aggr_func_TRUNC 958 (96%) 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_func_SQRT 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_func_YEAR 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_func_ABS 968 (97%) | 3 | 1 (0.1%) |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | WHERE_n_of_operatorsgreater_or_less | |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | 0 | 432 (43%) |
| 3 72 (7.2%) 4 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operatorsbetween 0 623 (62%) 1 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 2 (0.2%) WHERE_n_of_non_aggr_funcTRUNC 958 (96%) 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_funcSQRT 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 964 (96%) 0 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 968 (97%) | 1 | 297 (30%) |
| 4 29 (2.9%) 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operators_between 623 (62%) 1 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 2 (0.2%) WHERE_n_of_non_aggr_funcTRUNC 958 (96%) 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_funcSQRT 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 964 (96%) 0 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 968 (97%) | 2 | 162~(16%) |
| 5 7 (0.7%) 6 1 (0.1%) WHERE_n_of_operators_between 623 (62%) 1 281 (28%) 2 74 (7.4%) 3 20 (2.0%) 4 2 (0.2%) WHERE_n_of_non_aggr_funcTRUNC 958 (96%) 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_funcSQRT 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 968 (97%) | 3 | 72~(7.2%) |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | 4 | 29~(2.9%) |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | 7~(0.7%) |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | 6 | 1 (0.1%) |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | WHERE_n_of_operatorsbetween | |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | θ | 623~(62%) |
| 3 20 (2.0%) 4 2 (0.2%) WHERE_n_of_non_aggr_funcTRUNC 958 (96%) 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_funcSQRT 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 968 (97%) | 1 | 281 (28%) |
| 4 2 (0.2%) WHERE_n_of_non_aggr_funcTRUNC 958 (96%) 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_funcSQRT 902 (90%) 0 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 968 (97%) | | |
| WHERE_n_of_non_aggr_funcTRUNC 0 | 3 | , , |
| 0 958 (96%) 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_funcSQRT 902 (90%) 0 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 968 (97%) | 4 | 2~(0.2%) |
| 1 41 (4.1%) 2 1 (0.1%) WHERE_n_of_non_aggr_funcSQRT 902 (90%) 0 90 (9.0%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 968 (97%) | WHERE_n_of_non_aggr_funcTRUNC | |
| 2 1 (0.1%) WHERE_n_of_non_aggr_funcSQRT 902 (90%) 0 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 964 (96%) 0 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 968 (97%) | 0 | · · · · · · · · · · · · · · · · · · · |
| WHERE_n_of_non_aggr_funcSQRT 0 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 0 964 (96%) 1 34 (3.4%) 2 968 (97%) WHERE_n_of_non_aggr_funcABS 0 968 (97%) | | ` / |
| 0 902 (90%) 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 968 (97%) 0 968 (97%) | | 1~(0.1%) |
| 1 90 (9.0%) 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 0 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 0 968 (97%) | | |
| 2 7 (0.7%) 3 1 (0.1%) WHERE_n_of_non_aggr_funcYEAR 964 (96%) 0 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 968 (97%) 0 968 (97%) | 0 | , |
| 3 | | , , |
| WHERE_n_of_non_aggr_funcYEAR 0 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 0 968 (97%) | | , , |
| 0 964 (96%) 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 0 968 (97%) | | 1 (0.1%) |
| 1 34 (3.4%) 2 2 (0.2%) WHERE_n_of_non_aggr_funcABS 0 968 (97%) | | |
| 2 (0.2%) WHERE_n_of_non_aggr_funcABS 0 968 (97%) | 0 | ` , |
| WHERE_n_of_non_aggr_funcABS 968 (97%) | | ` / |
| 968 (97%) | | 2~(0.2%) |
| | | |
| $31 \ (3.1\%)$ | | ` , |
| | 1 | $31 \ (3.1\%)$ |

| Query parameter or value | Descriptive statistics |
|--|------------------------------------|
| 2 | 1 (0.1%) |
| WHERE_n_of_non_aggr_funcROUND | · · · · · · |
| 0 | 969 (97%) |
| 1 | 31 (3.1%) |
| WHERE_n_of_non_aggr_funcDOW | , |
| 0 | 971 (97%) |
| 1 | $29\ (2.9\%)$ |
| WHERE_n_of_non_aggr_funcLOG | , |
| 0 | 949 (95%) |
| 1 | 50 (5.0%) |
| 2 | 1 (0.1%) |
| WHERE_n_of_non_aggr_funcDAY | , |
| 0 | 975 (98%) |
| 1 | 24 (2.4%) |
| 2 | 1 (0.1%) |
| WHERE n_of_non_aggr_funcMONTH | , |
| 0 | 980 (98%) |
| 1 | 19 (1.9%) |
| 2 | 1 (0.1%) |
| WHERE_n_of_non_aggr_funcFLOOR | |
| 0 | 961 (96%) |
| 1 | $39 \ (3.9\%)$ |
| WHERE_n_of_all_non_aggr_func | (|
| 0 = 0 = 0 | 686~(69%) |
| 1 | 231 (23%) |
| 2 | 64 (6.4%) |
| 3 | 16 (1.6%) |
| 4 | 3(0.3%) |
| GROUP_BY_n_of_columns | [0.00, 2.00, 9.00] $[0.00, 2.00]$ |
| HAVING_n_of_main_predicates | [,,] |
| 0 | 290 (29%) |
| 1 | 105 (11%) |
| 2 | 126 (13%) |
| 3 | 185 (19%) |
| 4 | 146 (15%) |
| 5 | 94 (9.4%) |
| 6 | 54 (5.4%) |
| HAVING_n_of_main_predicatesscalar_subquer | , |
| 0 | 433 (43%) |
| 1 | 200 (20%) |
| 2 | 162 (16%) |
| 3 | 205 (21%) |
| HAVING_n_of_subqueriesscalar_subquery | $[0.0, 1.0, 21.0] \ 2.5 \ / \ 3.7$ |
| HAVING_n_of_processed_rows_by_subqueries[0, 6] | |
| ORDER_BY_n_of_columns | 1,012,002,201 |

| Query parameter or value | Descriptive statistics |
|--------------------------|-------------------------------|
| 0 | 329 (33%) |
| 1 | 384 (38%) |
| 2 | 213 (21%) |
| 3 | 59 (5.9%) |
| 4 | 8 (0.8%) |
| 5 | 4~(0.4%) |
| 7 | 1 (0.1%) |
| 8 | $2\;(0.2\%)$ |
| limit | [1, 512, 999] 513 / 288 |
| offset | $[0, 1, 996] \ 252 \ / \ 321$ |