# Stats via Execution Plan Report - QueryID = 7740365855379636009

## Contents

## Overview

**Stats via EXPLAIN ANALYZE script gather stats for all database objects involved in the execution plan for a query.**
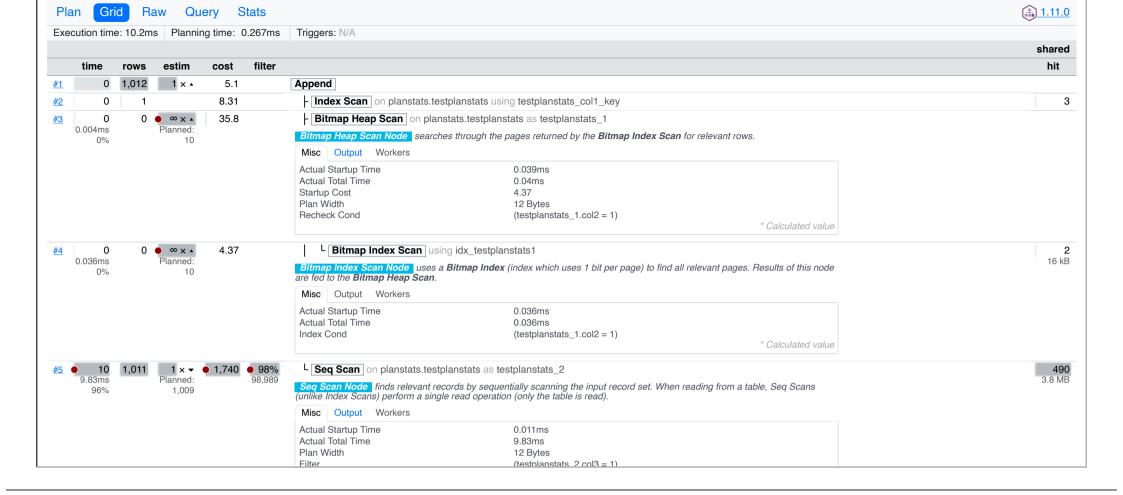
Report Creation Time : **2024-08-02 00:17:14**

## Query and Execution Plan Details

**This section shows SQL details along with the underlying execution plan.**

## Postgres Explain Visualizer - Dalibo

Execution time: 10.2ms   Planning time: 0.267ms   Triggers: N/A

| | time | rows | estim | cost | filter | | shared hit |
|---|---|---|---|---|---|---|---|
| #1 | 0 | 1,012 | 1 × ▲ | 5.1 | | **Append** | |
| #2 | 0 | 1 | | 8.31 | | ├ **Index Scan** on planstats.testplanstats using testplanstats_col1_key | 3 |
| #3 | 0 0.004ms 0% | 0 | ● ∞ × ▲ Planned: 10 | 35.8 | | ├ **Bitmap Heap Scan** on planstats.testplanstats as testplanstats_1 | |

**Bitmap Heap Scan Node** searches through the pages returned by the **Bitmap Index Scan** for relevant rows.

Misc | **Output** | Workers

| | |
|---|---|
| Actual Startup Time | 0.039ms |
| Actual Total Time | 0.04ms |
| Startup Cost | 4.37 |
| Plan Width | 12 Bytes |
| Recheck Cond | (testplanstats_1.col2 = 1) |

*Calculated value*

| | time | rows | estim | cost | | | shared hit |
|---|---|---|---|---|---|---|---|
| #4 | 0 0.036ms 0% | 0 | ● ∞ × ▲ Planned: 10 | 4.37 | │ └ **Bitmap Index Scan** using idx_testplanstats1 | | 2 16 kB |

**Bitmap Index Scan Node** uses a **Bitmap Index** (index which uses 1 bit per page) to find all relevant pages. Results of this node are fed to the **Bitmap Heap Scan**.

Misc | Output | Workers

| | |
|---|---|
| Actual Startup Time | 0.036ms |
| Actual Total Time | 0.036ms |
| Index Cond | (testplanstats_1.col2 = 1) |

*Calculated value*

| | time | rows | estim | cost | filter | | shared hit |
|---|---|---|---|---|---|---|---|
| #5 | ● 10 9.83ms 96% | 1,011 | 1 × ▼ Planned: 1,009 | ● 1,740 | ● 98% 98,989 | └ **Seq Scan** on planstats.testplanstats as testplanstats_2 | ● 490 3.8 MB |

**Seq Scan Node** finds relevant records by sequentially scanning the input record set. When reading from a table, Seq Scans (unlike Index Scans) perform a single read operation (only the table is read).

Misc | **Output** | Workers

| | |
|---|---|
| Actual Startup Time | 0.011ms |
| Actual Total Time | 9.83ms |
| Plan Width | 12 Bytes |
| Filter | (testplanstats_2.col3 = 1) |

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## Query and Object Statistics

This section shows underlying statistics of objects involve in Execution plan of the SQL.

## Performance Metrics - pg_stats_statements

This section shows the underlying runtime execution stats of SQL.

| QueryID | Mean_Planning_Time | Mean_Execution_Time | Standard_Deviation_Exec_Time | Row_Per_Exec | Calls | Plan Count | Disk IO per Call | Buffer IO per Call | Disk Temp Usage |
|---|---|---|---|---|---|---|---|---|---|
| 7740365855379636009 | 0.42 | 5.42 | 5.63 | 506 | 18 | 18 | 0 | 264 | 0 |

## Database Table Stats Summary

This section shows the underlying stats of the table referenced in the execution plan.

| SchemaName | TableName | Table_Size | Index_Size | TablePages | LiveRows | DeadRows | Partition? | BloatPerc | HOT rate | LVacuumTime | LAnalyzeTime | AVThres | AVSclFactor | AVThreshold | Expect_AV | Pub? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| planstats | testplanstats | 3920 kB | 3056 kB | 490 | 100000 | 0 | N | 0 | 0.00 | 01-AUG-24 13:00:46 | 01-AUG-24 13:00:46 | 50 | 0.2 | 20,050 | | N |

## Database Index Stats Summary

This section shows the underlying stats of the index referenced in the execution plan.

| SchemaName | TableName | IndexName | IndexSize | IndexScan | LastIndexScan | IndexEntryScan | TableRowsFetch | IndexDef |
|---|---|---|---|---|---|---|---|---|
| planstats | testplanstats | idx_testplanstats1 | 816 kB | 9 | 01-AUG-24 20:18:46 | 0 | 0 | btree (col2) |
| planstats | testplanstats | testplanstats_col1_key | 2208 kB | 9 | 01-AUG-24 20:18:46 | 9 | 9 | UNIQUE btree (col1) |

## Execution Plan Columns Stats Summary

This section shows the underlying stats of the column referenced in the execution plan.

| SchemaName | TableName | ColumnName | DataType | Nullable | Null Fraction | Distinct | Correlation | Selectivity | Storage Type | Compression | Statistics Target | Most Common Val(5) | Most Common Freq(5) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| planstats | testplanstats | col1 | integer | NULL | 0.00 | -1 | 1.000 | 1.00 | plain | | | | |
| planstats | testplanstats | col2 | integer | NULL | 0.52 | 4848 | 0.102 | 9.99 | plain | | 300 | | |
| planstats | testplanstats | col3 | integer | NULL | 0.00 | 99 | 0.011 | 1010.10 | plain | | | {81,73,88,45,24} | {0.010333333,0.0103222225,0.010311111,0.0103,0.010288889} |

## Execution Plan Extended Stats Summary

This section shows the underlying extended stats of the Table referenced in the execution plan.

| Schema | TableName | Statistics Name | columns | NDistinct | Dependency | MCV | Statistics Target |
|---|---|---|---|---|---|---|---|
| planstats | testplanstats | teststats1 | col2, col3 | Y | Y | Y | -1 |

## Execution Plan Trigger Stats Summary

This section shows the underlying details of triggers referenced in the execution plan, if any.

| triggername | Time | Calls | TableName | ProcedureName | TriggerDef |
|---|---|---|---|---|---|

## Execution Plan Function Stats Summary

This section shows the underlying details of functions referenced in the execution plan, but only if the *track_functions* flag is set.

| schemaname | funcname | calls | total_time | self_time | Type | Volatility | Parallel | Language | Filter |
|---|---|---|---|---|---|---|---|---|---|

## Additional Configuration and Database Details

This section shows additional database details along with must-know configurations for execution plan analysis.

## PostgreSQL Version and Database Details

| Database Name | version | Size | Hit Ratio | xact_commit_ratio | xact_rollback_ratio | deadlocks | conflicts | Temp Files | Total Temp |
|---|---|---|---|---|---|---|---|---|---|
| plantest | PostgreSQL 16.3 | 41 MB | 99 | 95 | 4 | 0 | 0 | 12 | 67 MB |

## Database Settings During Execution

| Execution Plan Setting | Value |
|---|---|
| search_path | planstats, public |
| work_mem | 1MB |

## Database Parameter Settings Other Than Defaults

| Parameter | Value |
|---|---|
| TimeZone | Asia/Kolkata |
| application_name | psql |
| client_encoding | UTF8 |
| default_text_search_config | pg_catalog.english |
| lc_messages | C |
| listen_addresses | * |
| log_timezone | Asia/Kolkata |
| logging_collector | on |
| search_path | planstats, public |
| shared_preload_libraries | pg_stat_statements,auto_explain |
| track_functions | all |

## Important Configuration Settings for Execution Plan

| Parameter | Value |
|---|---|
| default_statistics_target | 100 |
| from_collapse_limit | 8 |
| hash_mem_multiplier | 2 |
| join_collapse_limit | 8 |
| max_parallel_workers | 8 |
| max_parallel_workers_per_gather | 2 |
| min_parallel_table_scan_size | 8MB |
| plan_cache_mode | auto |
| random_page_cost | 4 |
| seq_page_cost | 1 |
| temp_buffers | 8MB |
| work_mem | 4MB |

# End Report