



## A. RESULTADOS OBTENIDOS CON MySQL BENCHMARK.

### A.1. MySQL (MyISAM).

```
Benchmark DBD suite: 2.15
Date of test: 2005-11-17 20:42:30
Running tests on: Linux 2.6.11-1.1369_FC4 i686
Arguments: --threads=1
Comments:
Limits from:
Server version: MySQL 4.1.11/
Optimization: None
Hardware:
```

```
alter-table: Total time: 46 wallclock secs ( 0.06 usr 0.02 sys + 0.00 cusr
0.00 csys = 0.08 CPU)
ATIS: Total time: 22 wallclock secs ( 7.11 usr 2.04 sys + 0.00 cusr 0.00
csys = 9.15 CPU)
big-tables: Total time: 19 wallclock secs ( 5.30 usr 4.19 sys + 0.00 cusr
0.00 csys = 9.49 CPU)
connect: Total time: 112 wallclock secs (41.62 usr 17.84 sys + 0.00 cusr
0.00 csys = 59.46 CPU)
create: Total time: 160 wallclock secs ( 3.19 usr 0.69 sys + 0.00 cusr 0.00
csys = 3.88 CPU)
insert: Total time: 2050 wallclock secs (464.36 usr 98.48 sys + 0.00 cusr
0.00 csys = 562.84 CPU)
select: Total time: 359 wallclock secs (45.78 usr 8.39 sys + 0.00 cusr 0.00
csys = 54.17 CPU)
transactions: Test skipped because the database doesn't support transactions
wisconsin: Total time: 8 wallclock secs ( 2.49 usr 0.77 sys + 0.00 cusr
0.00 csys = 3.26 CPU)
```

All 9 test executed successfully

Totals per operation:

| Operation                         | seconds | usr    | sys   | cpu  | tests |        |
|-----------------------------------|---------|--------|-------|------|-------|--------|
| alter_table_add                   |         | 20.00  | 0.02  | 0.00 | 0.02  | 100    |
| alter_table_drop                  |         | 19.00  | 0.02  | 0.00 | 0.02  | 91     |
| connect                           |         | 12.00  | 5.90  | 0.89 | 6.79  | 10000  |
| connect+select_1_row              |         | 13.00  | 6.74  | 1.34 | 8.08  | 10000  |
| connect+select_simple             |         | 12.00  | 6.36  | 1.25 | 7.61  | 10000  |
| count                             |         | 8.00   | 0.02  | 0.00 | 0.02  | 100    |
| count_distinct                    |         | 11.00  | 0.28  | 0.03 | 0.31  | 1000   |
| count_distinct_2                  |         | 15.00  | 0.29  | 0.04 | 0.33  | 1000   |
| count_distinct_big                |         | 21.00  | 5.92  | 1.96 | 7.88  | 120    |
| count_distinct_group              |         | 11.00  | 0.94  | 0.21 | 1.15  | 1000   |
| count_distinct_group_on_key       |         | 14.00  | 0.35  | 0.04 | 0.39  | 1000   |
| count_distinct_group_on_key_parts |         | 11.00  | 0.92  | 0.22 | 1.14  | 1000   |
| count_distinct_key_prefix         |         | 8.00   | 0.28  | 0.03 | 0.31  | 1000   |
| count_group_on_key_parts          |         | 13.00  | 0.86  | 0.25 | 1.11  | 1000   |
| count_on_key                      |         | 134.00 | 12.11 | 1.33 | 13.44 | 50100  |
| create+drop                       |         | 46.00  | 0.96  | 0.09 | 1.05  | 10000  |
| create_MANY_tables                |         | 63.00  | 0.75  | 0.11 | 0.86  | 10000  |
| create_index                      |         | 3.00   | 0.00  | 0.00 | 0.00  | 8      |
| create_key+drop                   |         | 47.00  | 0.77  | 0.16 | 0.93  | 10000  |
| create_table                      |         | 1.00   | 0.00  | 0.00 | 0.00  | 31     |
| delete_all_many_keys              |         | 296.00 | 0.02  | 0.00 | 0.02  | 1      |
| delete_big                        |         | 1.00   | 0.00  | 0.00 | 0.00  | 1      |
| delete_big_many_keys              |         | 296.00 | 0.02  | 0.00 | 0.02  | 128    |
| delete_key                        |         | 3.00   | 0.26  | 0.11 | 0.37  | 10000  |
| delete_range                      |         | 6.00   | 0.00  | 0.00 | 0.00  | 12     |
| drop_index                        |         | 4.00   | 0.00  | 0.01 | 0.01  | 8      |
| drop_table                        |         | 0.00   | 0.00  | 0.01 | 0.01  | 28     |
| drop_table_when_MANY_tables       |         | 2.00   | 0.25  | 0.12 | 0.37  | 10000  |
| insert                            |         | 45.00  | 9.49  | 3.33 | 12.82 | 350768 |



## A. Resultados obtenidos con MySQL Benchmark

|                                 |         |        |        |        |         |
|---------------------------------|---------|--------|--------|--------|---------|
| insert_duplicates               | 12.00   | 2.63   | 0.96   | 3.59   | 100000  |
| insert_key                      | 528.00  | 7.33   | 1.62   | 8.95   | 100000  |
| insert_many_fields              | 3.00    | 0.34   | 0.05   | 0.39   | 2000    |
| insert_select_1_key             | 2.00    | 0.00   | 0.00   | 0.00   | 1       |
| insert_select_2_keys            | 3.00    | 0.00   | 0.00   | 0.00   | 1       |
| min_max                         | 6.00    | 0.02   | 0.00   | 0.02   | 60      |
| min_max_on_key                  | 28.00   | 15.65  | 2.07   | 17.72  | 85000   |
| multiple_value_insert           | 2.00    | 0.25   | 0.02   | 0.27   | 100000  |
| once_prepared_select            | 24.00   | 7.46   | 2.57   | 10.03  | 100000  |
| order_by_big                    | 30.00   | 16.71  | 5.69   | 22.40  | 10      |
| order_by_big_key                | 27.00   | 16.93  | 5.72   | 22.65  | 10      |
| order_by_big_key2               | 25.00   | 16.60  | 5.74   | 22.34  | 10      |
| order_by_big_key_desc           | 28.00   | 17.47  | 5.75   | 23.22  | 10      |
| order_by_big_key_diff           | 27.00   | 16.59  | 5.72   | 22.31  | 10      |
| order_by_big_key_prefix         | 26.00   | 16.72  | 5.68   | 22.40  | 10      |
| order_by_key2_diff              | 3.00    | 1.53   | 0.49   | 2.02   | 500     |
| order_by_key_prefix             | 2.00    | 0.83   | 0.26   | 1.09   | 500     |
| order_by_range                  | 1.00    | 0.86   | 0.25   | 1.11   | 500     |
| outer_join                      | 21.00   | 0.01   | 0.00   | 0.01   | 10      |
| outer_join_found                | 20.00   | 0.00   | 0.00   | 0.00   | 10      |
| outer_join_not_found            | 14.00   | 0.01   | 0.00   | 0.01   | 500     |
| outer_join_on_key               | 15.00   | 0.00   | 0.00   | 0.00   | 10      |
| prepared_select                 | 42.00   | 20.56  | 2.69   | 23.25  | 100000  |
| select_1_row                    | 12.00   | 3.22   | 2.58   | 5.80   | 100000  |
| select_1_row_cache              | 11.00   | 2.94   | 2.31   | 5.25   | 100000  |
| select_2_rows                   | 14.00   | 3.77   | 2.69   | 6.46   | 100000  |
| select_big                      | 26.00   | 16.68  | 5.77   | 22.45  | 80      |
| select_big_str                  | 11.00   | 5.24   | 1.13   | 6.37   | 10000   |
| select_cache                    | 28.00   | 2.02   | 0.18   | 2.20   | 10000   |
| select_cache2                   | 29.00   | 2.01   | 0.14   | 2.15   | 10000   |
| select_column+column            | 13.00   | 2.85   | 2.05   | 4.90   | 100000  |
| select_diff_key                 | 35.00   | 0.18   | 0.01   | 0.19   | 500     |
| select_distinct                 | 6.00    | 1.36   | 0.37   | 1.73   | 800     |
| select_group                    | 17.00   | 1.22   | 0.24   | 1.46   | 2911    |
| select_group_when_MANY_tables   | 2.00    | 0.46   | 0.21   | 0.67   | 10000   |
| select_join                     | 1.00    | 0.37   | 0.12   | 0.49   | 100     |
| select_key                      | 80.00   | 43.01  | 6.56   | 49.57  | 200000  |
| select_key2                     | 85.00   | 44.40  | 6.43   | 50.83  | 200000  |
| select_key2_return_key          | 80.00   | 42.88  | 5.20   | 48.08  | 200000  |
| select_key2_return_prim         | 83.00   | 44.34  | 5.61   | 49.95  | 200000  |
| select_key_prefix               | 87.00   | 44.43  | 6.75   | 51.18  | 200000  |
| select_key_prefix_join          | 7.00    | 3.32   | 1.06   | 4.38   | 100     |
| select_key_return_key           | 76.00   | 41.95  | 5.68   | 47.63  | 200000  |
| select_many_fields              | 16.00   | 4.96   | 4.14   | 9.10   | 2000    |
| select_range                    | 60.00   | 6.66   | 2.14   | 8.80   | 410     |
| select_range_key2               | 10.00   | 4.76   | 0.68   | 5.44   | 25010   |
| select_range_prefix             | 11.00   | 4.64   | 0.75   | 5.39   | 25010   |
| select_simple                   | 7.00    | 2.42   | 1.80   | 4.22   | 100000  |
| select_simple_cache             | 7.00    | 2.17   | 1.80   | 3.97   | 100000  |
| select_simple_join              | 1.00    | 0.49   | 0.13   | 0.62   | 500     |
| update_big                      | 13.00   | 0.01   | 0.00   | 0.01   | 10      |
| update_of_key                   | 24.00   | 1.65   | 0.73   | 2.38   | 50000   |
| update_of_key_big               | 8.00    | 0.03   | 0.02   | 0.05   | 501     |
| update_of_primary_key_many_keys | 89.00   | 0.01   | 0.01   | 0.02   | 256     |
| update_with_key                 | 48.00   | 8.48   | 3.88   | 12.36  | 300000  |
| update_with_key_prefix          | 18.00   | 5.68   | 1.75   | 7.43   | 100000  |
| wisc_benchmark                  | 3.00    | 1.59   | 0.49   | 2.08   | 114     |
| TOTALS                          | 3042.00 | 562.23 | 130.22 | 692.45 | 3425950 |

### A.2. MySQL (InnoDB).

Benchmark DBD suite: 2.15  
Date of test: 2005-11-17 20:42:30  
Running tests on: Linux 2.6.11-1.1369\_FC4 i686  
Arguments: --threads=1  
Comments:  
Limits from:



## A. Resultados obtenidos con MySQL Benchmark

Server version: MySQL 4.1.11/  
Optimization: None  
Hardware:

alter-table: Total time: 46 wallclock secs ( 0.06 usr 0.02 sys + 0.00 cusr 0.00 csys = 0.08 CPU)  
ATIS: Total time: 22 wallclock secs ( 7.11 usr 2.04 sys + 0.00 cusr 0.00 csys = 9.15 CPU)  
big-tables: Total time: 19 wallclock secs ( 5.30 usr 4.19 sys + 0.00 cusr 0.00 csys = 9.49 CPU)  
connect: Total time: 112 wallclock secs (41.62 usr 17.84 sys + 0.00 cusr 0.00 csys = 59.46 CPU)  
create: Total time: 160 wallclock secs ( 3.19 usr 0.69 sys + 0.00 cusr 0.00 csys = 3.88 CPU)  
insert: Total time: 2050 wallclock secs (464.36 usr 98.48 sys + 0.00 cusr 0.00 csys = 562.84 CPU)  
select: Total time: 359 wallclock secs (45.78 usr 8.39 sys + 0.00 cusr 0.00 csys = 54.17 CPU)  
transactions: Test skipped because the database doesn't support transactions  
wisconsin: Total time: 8 wallclock secs ( 2.49 usr 0.77 sys + 0.00 cusr 0.00 csys = 3.26 CPU)

All 9 test executed successfully

Totals per operation:

| Operation                         | seconds | usr    | sys   | cpu  | tests |        |
|-----------------------------------|---------|--------|-------|------|-------|--------|
| alter_table_add                   |         | 20.00  | 0.02  | 0.00 | 0.02  | 100    |
| alter_table_drop                  |         | 19.00  | 0.02  | 0.00 | 0.02  | 91     |
| connect                           |         | 12.00  | 5.90  | 0.89 | 6.79  | 10000  |
| connect+select_1_row              |         | 13.00  | 6.74  | 1.34 | 8.08  | 10000  |
| connect+select_simple             |         | 12.00  | 6.36  | 1.25 | 7.61  | 10000  |
| count                             |         | 8.00   | 0.02  | 0.00 | 0.02  | 100    |
| count_distinct                    |         | 11.00  | 0.28  | 0.03 | 0.31  | 1000   |
| count_distinct_2                  |         | 15.00  | 0.29  | 0.04 | 0.33  | 1000   |
| count_distinct_big                |         | 21.00  | 5.92  | 1.96 | 7.88  | 120    |
| count_distinct_group              |         | 11.00  | 0.94  | 0.21 | 1.15  | 1000   |
| count_distinct_group_on_key       |         | 14.00  | 0.35  | 0.04 | 0.39  | 1000   |
| count_distinct_group_on_key_parts |         | 11.00  | 0.92  | 0.22 | 1.14  | 1000   |
| count_distinct_key_prefix         |         | 8.00   | 0.28  | 0.03 | 0.31  | 1000   |
| count_group_on_key_parts          |         | 13.00  | 0.86  | 0.25 | 1.11  | 1000   |
| count_on_key                      |         | 134.00 | 12.11 | 1.33 | 13.44 | 50100  |
| create+drop                       |         | 46.00  | 0.96  | 0.09 | 1.05  | 10000  |
| create_MANY_tables                |         | 63.00  | 0.75  | 0.11 | 0.86  | 10000  |
| create_index                      |         | 3.00   | 0.00  | 0.00 | 0.00  | 8      |
| create_key+drop                   |         | 47.00  | 0.77  | 0.16 | 0.93  | 10000  |
| create_table                      |         | 1.00   | 0.00  | 0.00 | 0.00  | 31     |
| delete_all_many_keys              |         | 296.00 | 0.02  | 0.00 | 0.02  | 1      |
| delete_big                        |         | 1.00   | 0.00  | 0.00 | 0.00  | 1      |
| delete_big_many_keys              |         | 296.00 | 0.02  | 0.00 | 0.02  | 128    |
| delete_key                        |         | 3.00   | 0.26  | 0.11 | 0.37  | 10000  |
| delete_range                      |         | 6.00   | 0.00  | 0.00 | 0.00  | 12     |
| drop_index                        |         | 4.00   | 0.00  | 0.01 | 0.01  | 8      |
| drop_table                        |         | 0.00   | 0.00  | 0.01 | 0.01  | 28     |
| drop_table_when_MANY_tables       |         | 2.00   | 0.25  | 0.12 | 0.37  | 10000  |
| insert                            |         | 45.00  | 9.49  | 3.33 | 12.82 | 350768 |
| insert_duplicates                 |         | 12.00  | 2.63  | 0.96 | 3.59  | 100000 |
| insert_key                        |         | 528.00 | 7.33  | 1.62 | 8.95  | 100000 |
| insert_many_fields                |         | 3.00   | 0.34  | 0.05 | 0.39  | 2000   |
| insert_select_1_key               |         | 2.00   | 0.00  | 0.00 | 0.00  | 1      |
| insert_select_2_keys              |         | 3.00   | 0.00  | 0.00 | 0.00  | 1      |
| min_max                           |         | 6.00   | 0.02  | 0.00 | 0.02  | 60     |
| min_max_on_key                    |         | 28.00  | 15.65 | 2.07 | 17.72 | 85000  |
| multiple_value_insert             |         | 2.00   | 0.25  | 0.02 | 0.27  | 100000 |
| once_prepared_select              |         | 24.00  | 7.46  | 2.57 | 10.03 | 100000 |
| order_by_big                      |         | 30.00  | 16.71 | 5.69 | 22.40 | 10     |
| order_by_big_key                  |         | 27.00  | 16.93 | 5.72 | 22.65 | 10     |
| order_by_big_key2                 |         | 25.00  | 16.60 | 5.74 | 22.34 | 10     |
| order_by_big_key_desc             |         | 28.00  | 17.47 | 5.75 | 23.22 | 10     |



## A. Resultados obtenidos con MySQL Benchmark

|                                 |         |        |        |        |         |
|---------------------------------|---------|--------|--------|--------|---------|
| order_by_big_key_diff           | 27.00   | 16.59  | 5.72   | 22.31  | 10      |
| order_by_big_key_prefix         | 26.00   | 16.72  | 5.68   | 22.40  | 10      |
| order_by_key2_diff              | 3.00    | 1.53   | 0.49   | 2.02   | 500     |
| order_by_key_prefix             | 2.00    | 0.83   | 0.26   | 1.09   | 500     |
| order_by_range                  | 1.00    | 0.86   | 0.25   | 1.11   | 500     |
| outer_join                      | 21.00   | 0.01   | 0.00   | 0.01   | 10      |
| outer_join_found                | 20.00   | 0.00   | 0.00   | 0.00   | 10      |
| outer_join_not_found            | 14.00   | 0.01   | 0.00   | 0.01   | 500     |
| outer_join_on_key               | 15.00   | 0.00   | 0.00   | 0.00   | 10      |
| prepared_select                 | 42.00   | 20.56  | 2.69   | 23.25  | 100000  |
| select_1_row                    | 12.00   | 3.22   | 2.58   | 5.80   | 100000  |
| select_1_row_cache              | 11.00   | 2.94   | 2.31   | 5.25   | 100000  |
| select_2_rows                   | 14.00   | 3.77   | 2.69   | 6.46   | 100000  |
| select_big                      | 26.00   | 16.68  | 5.77   | 22.45  | 80      |
| select_big_str                  | 11.00   | 5.24   | 1.13   | 6.37   | 10000   |
| select_cache                    | 28.00   | 2.02   | 0.18   | 2.20   | 10000   |
| select_cache2                   | 29.00   | 2.01   | 0.14   | 2.15   | 10000   |
| select_column+column            | 13.00   | 2.85   | 2.05   | 4.90   | 100000  |
| select_diff_key                 | 35.00   | 0.18   | 0.01   | 0.19   | 500     |
| select_distinct                 | 6.00    | 1.36   | 0.37   | 1.73   | 800     |
| select_group                    | 17.00   | 1.22   | 0.24   | 1.46   | 2911    |
| select_group_when_MANY_tables   | 2.00    | 0.46   | 0.21   | 0.67   | 10000   |
| select_join                     | 1.00    | 0.37   | 0.12   | 0.49   | 100     |
| select_key                      | 80.00   | 43.01  | 6.56   | 49.57  | 200000  |
| select_key2                     | 85.00   | 44.40  | 6.43   | 50.83  | 200000  |
| select_key2_return_key          | 80.00   | 42.88  | 5.20   | 48.08  | 200000  |
| select_key2_return_prim         | 83.00   | 44.34  | 5.61   | 49.95  | 200000  |
| select_key_prefix               | 87.00   | 44.43  | 6.75   | 51.18  | 200000  |
| select_key_prefix_join          | 7.00    | 3.32   | 1.06   | 4.38   | 100     |
| select_key_return_key           | 76.00   | 41.95  | 5.68   | 47.63  | 200000  |
| select_many_fields              | 16.00   | 4.96   | 4.14   | 9.10   | 2000    |
| select_range                    | 60.00   | 6.66   | 2.14   | 8.80   | 410     |
| select_range_key2               | 10.00   | 4.76   | 0.68   | 5.44   | 25010   |
| select_range_prefix             | 11.00   | 4.64   | 0.75   | 5.39   | 25010   |
| select_simple                   | 7.00    | 2.42   | 1.80   | 4.22   | 100000  |
| select_simple_cache             | 7.00    | 2.17   | 1.80   | 3.97   | 100000  |
| select_simple_join              | 1.00    | 0.49   | 0.13   | 0.62   | 500     |
| update_big                      | 13.00   | 0.01   | 0.00   | 0.01   | 10      |
| update_of_key                   | 24.00   | 1.65   | 0.73   | 2.38   | 50000   |
| update_of_key_big               | 8.00    | 0.03   | 0.02   | 0.05   | 501     |
| update_of_primary_key_many_keys | 89.00   | 0.01   | 0.01   | 0.02   | 256     |
| update_with_key                 | 48.00   | 8.48   | 3.88   | 12.36  | 300000  |
| update_with_key_prefix          | 18.00   | 5.68   | 1.75   | 7.43   | 100000  |
| wisc_benchmark                  | 3.00    | 1.59   | 0.49   | 2.08   | 114     |
| TOTALS                          | 3042.00 | 562.23 | 130.22 | 692.45 | 3425950 |

### A.3. PostgreSQL

Benchmark DBD suite: 2.15

Date of test: 2006-03-01 19:08:34

Running tests on: Linux 2.6.11-1.1369\_FC4 i686

Arguments: --threads=1

Comments:

Limits from:

Server version: PostgreSQL 8.0

Optimization: None

Hardware:

alter-table: Total time: 4 wallclock secs ( 0.65 usr 0.08 sys + 0.00 cusr  
0.00 csys = 0.73 CPU)

ATIS: Failed (output/ATIS-Pg-Linux\_2.6.11\_1.1369\_FC4\_i686)

big-tables: Total time: 76 wallclock secs ( 4.38 usr 0.21 sys + 0.00 cusr  
0.00 csys = 4.59 CPU)

connect: Total time: 440 wallclock secs (165.88 usr 21.66 sys + 0.00 cusr  
0.00 csys = 187.54 CPU)

create: Total time: 556 wallclock secs (24.39 usr 2.27 sys + 0.00 cusr 0.00  
csys = 26.66 CPU)



## A. Resultados obtenidos con MySQL Benchmark

```

insert: Estimated total time: 71151.1 wallclock secs (819.66 usr 70.69 sys +
0.00 cusr 0.00 csys = 890.34 CPU)
select: Estimated total time: 1568.92 wallclock secs (63.21 usr 5.21 sys +
0.00 cusr 0.00 csys = 68.42 CPU)
transactions: Total time: 73 wallclock secs (24.31 usr 2.34 sys + 0.00 cusr
0.00 csys = 26.65 CPU)
wisconsin: Total time: 45 wallclock secs (11.01 usr 0.96 sys + 0.00 cusr
0.00 csys = 11.97 CPU)

```

Of 9 tests, 1 tests didn't work  
Tests with estimated time have a + at end of line

```

Totals per operation:
Operation          seconds      usr      sys      cpu      tests
alter_table_add           3.00      0.36      0.05      0.41      992
connect                   41.00     7.12     1.69     8.81    10000
connect+select_1_row     60.00    10.74     1.99    12.73    10000
connect+select_simple    49.00     9.89     2.05    11.94    10000
count                     23.00     0.03     0.00     0.03     100
count_distinct           17.00     0.37     0.03     0.40    1000
count_distinct_2         25.00     0.38     0.06     0.44    1000
count_distinct_big      105.00     5.99     0.07     6.06     120
count_distinct_group     67.00     0.93     0.03     0.96    1000
count_distinct_group_on_key 39.00     0.37     0.03     0.40    1000
count_distinct_group_on_key_parts 68.00     0.95     0.05     1.00    1000
count_distinct_key_prefix 53.00     0.39     0.05     0.44    1000
count_group_on_key_parts 11.00     0.88     0.03     0.91    1000
count_on_key             309.00    14.99     1.66    16.65   50100
create+drop              248.00    10.07     0.97    11.04   10000
create_MANY_tables      117.00     3.54     0.32     3.86    5000
create_index              0.00      0.01     0.00     0.01     8
create_key+drop          137.00     7.84     0.66     8.50   10000
create_table              1.00      0.00     0.00     0.00     3
delete_all_many_keys     26.00     0.04     0.01     0.05     1
delete_autocommit        11.00     2.68     0.27     2.95   10000
delete_big                0.00      0.00     0.00     0.00     1
delete_big_many_keys     24.00     0.04     0.01     0.05    128
delete_commit             6.00      2.52     0.25     2.77   10000
delete_key                72.00     2.94     0.30     3.24   10000
delete_range              42.00     0.00     0.00     0.00     12
delete_rollback           6.00      2.59     0.23     2.82    100
drop_index                0.00      0.00     0.00     0.00     8
drop_table_when_MANY_tables 39.00     1.52     0.15     1.67    5000
insert                   392.00    95.82     8.60   104.42  341000
insert_autocommit        12.00     3.14     0.23     3.37   10000
insert_commit             6.00      2.69     0.21     2.90   10000
insert_duplicates        320.00    27.67     2.38    30.05  100000
insert_key                3976.00   32.66     3.10    35.76  100000
insert_many_fields       44.00     0.78     0.08     0.86    2000
insert_rollback           5.00      2.68     0.27     2.95    100
insert_select_1_key       9.00      0.00     0.00     0.00     1
insert_select_2_keys     12.00     0.00     0.00     0.00     1
min_max                   11.00     0.02     0.00     0.02     60
min_max_on_key           1644.57   25.83     2.72    28.55  85000 ++
once_prepared_select     22.00     7.76     1.38     9.14  100000
order_by_big              35.00    15.55     0.16    15.71    10
order_by_big_key          38.00    18.01     0.29    18.30    10
order_by_big_key2         34.00    15.69     0.17    15.86    10
order_by_big_key_desc     37.00    18.08     0.29    18.37    10
order_by_big_key_diff     34.00    15.54     0.17    15.71    10
order_by_big_key_prefix   34.00    15.68     0.18    15.86    10
order_by_key2_diff        2.00      1.49     0.03     1.52    500
order_by_key_prefix       2.00      0.85     0.02     0.87    500
order_by_range            1.00      0.83     0.03     0.86    500
outer_join                64.00     0.01     0.00     0.01    10
outer_join_found          62.00     0.00     0.01     0.01    10
outer_join_not_found     61.00     0.00     0.00     0.00    500
outer_join_on_key         50.00     0.00     0.00     0.00    10

```



## A. Resultados obtenidos con MySQL Benchmark

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|                                 |          |         |        |         |          |
|---------------------------------|----------|---------|--------|---------|----------|
| prepared_select                 | 66.00    | 27.41   | 2.70   | 30.11   | 100000   |
| select_1_row                    | 48.00    | 23.46   | 2.02   | 25.48   | 100000   |
| select_1_row_cache              | 48.00    | 22.80   | 2.40   | 25.20   | 100000   |
| select_2_rows                   | 50.00    | 23.37   | 2.25   | 25.62   | 100000   |
| select_big                      | 23.00    | 16.10   | 0.20   | 16.30   | 80       |
| select_big_str                  | 17.00    | 6.31    | 1.59   | 7.90    | 10000    |
| select_cache                    | 116.00   | 2.98    | 0.28   | 3.26    | 10000    |
| select_cache2                   | 116.00   | 2.95    | 0.28   | 3.23    | 10000    |
| select_column+column            | 59.00    | 24.84   | 2.34   | 27.18   | 100000   |
| select_diff_key                 | 111.00   | 0.20    | 0.01   | 0.21    | 500      |
| select_group                    | 64.00    | 0.05    | 0.00   | 0.05    | 111      |
| select_group_when_MANY_tables   | 15.00    | 1.42    | 0.17   | 1.59    | 5000     |
| select_key                      | 149.00   | 59.96   | 6.24   | 66.20   | 200000   |
| select_key2                     | 147.00   | 59.56   | 6.03   | 65.59   | 200000   |
| select_key2_return_key          | 144.00   | 58.68   | 6.06   | 64.74   | 200000   |
| select_key2_return_prim         | 142.00   | 59.22   | 5.80   | 65.02   | 200000   |
| select_key_prefix               | 141.00   | 59.31   | 5.95   | 65.26   | 200000   |
| select_key_return_key           | 148.00   | 59.65   | 6.15   | 65.80   | 200000   |
| select_many_fields              | 32.00    | 3.59    | 0.13   | 3.72    | 2000     |
| select_range                    | 29.00    | 8.03    | 0.15   | 8.18    | 410      |
| select_range_key2               | 6746.09  | 6.21    | 0.50   | 6.70    | 25010 ++ |
| select_range_prefix             | 6680.95  | 6.26    | 0.52   | 6.79    | 25010 ++ |
| select_simple                   | 33.00    | 19.59   | 2.64   | 22.23   | 100000   |
| select_simple_cache             | 34.00    | 17.76   | 2.69   | 20.45   | 100000   |
| update_autocommit               | 13.00    | 2.78    | 0.28   | 3.06    | 10000    |
| update_big                      | 905.00   | 0.00    | 0.00   | 0.00    | 10       |
| update_commit                   | 7.00     | 2.53    | 0.34   | 2.87    | 10000    |
| update_of_key                   | 200.00   | 14.83   | 1.53   | 16.36   | 50000    |
| update_of_key_big               | 95.00    | 0.16    | 0.02   | 0.18    | 501      |
| update_of_primary_key_many_keys | 9623.00  | 0.08    | 0.00   | 0.08    | 256      |
| update_rollback                 | 7.00     | 2.66    | 0.25   | 2.91    | 100      |
| update_with_key                 | 526.00   | 87.52   | 8.71   | 96.23   | 300000   |
| update_with_key_prefix          | 192.00   | 32.63   | 3.50   | 36.13   | 100000   |
| wisc_benchmark                  | 5.00     | 2.53    | 0.20   | 2.73    | 114      |
| TOTALS                          | 35238.61 | 1103.39 | 103.21 | 1206.60 | 3357927  |