

BALANCEO DE CARGA DE BASES DE DATOS CON CON MYSQL Y SQL ROUTER



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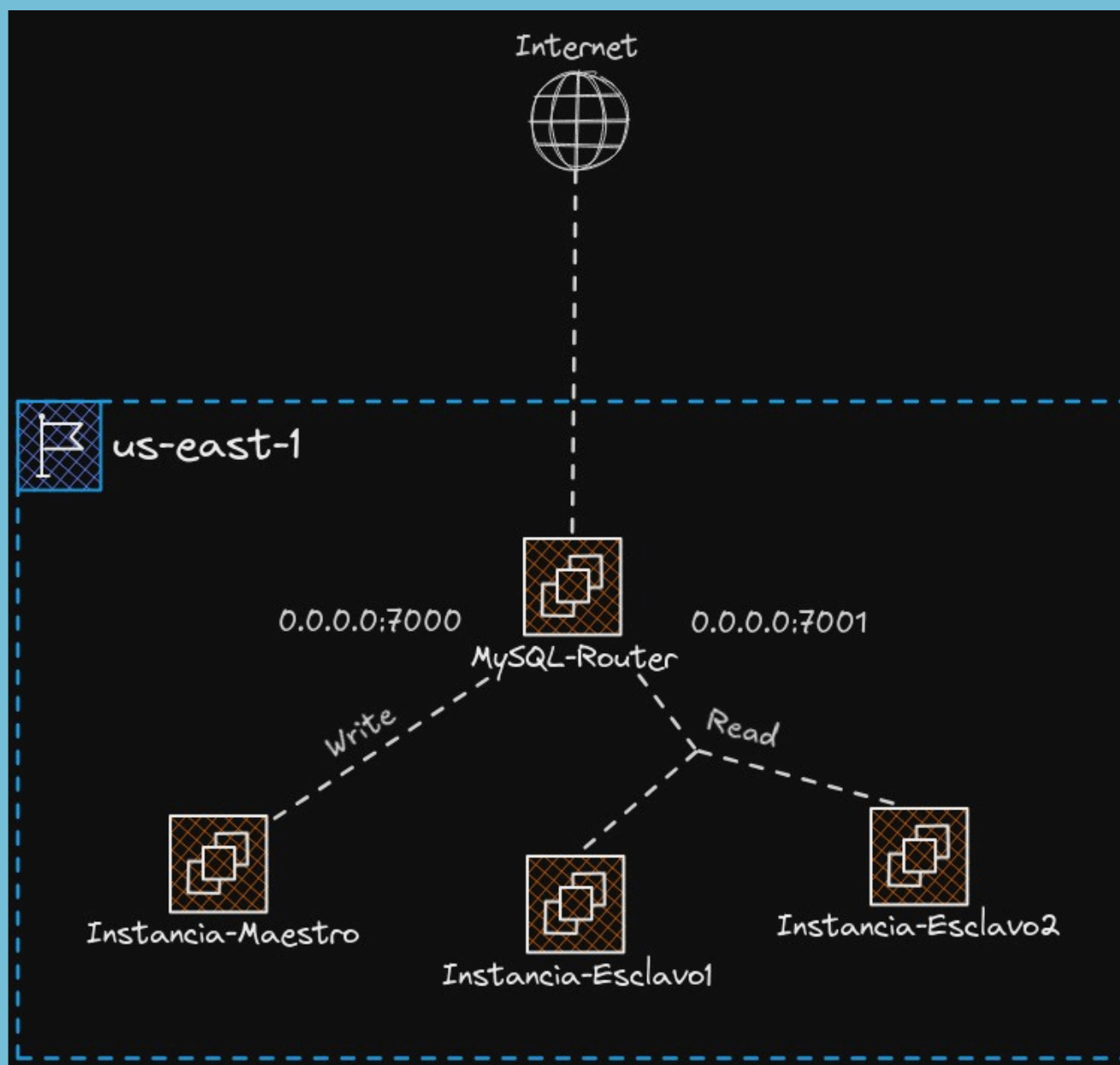
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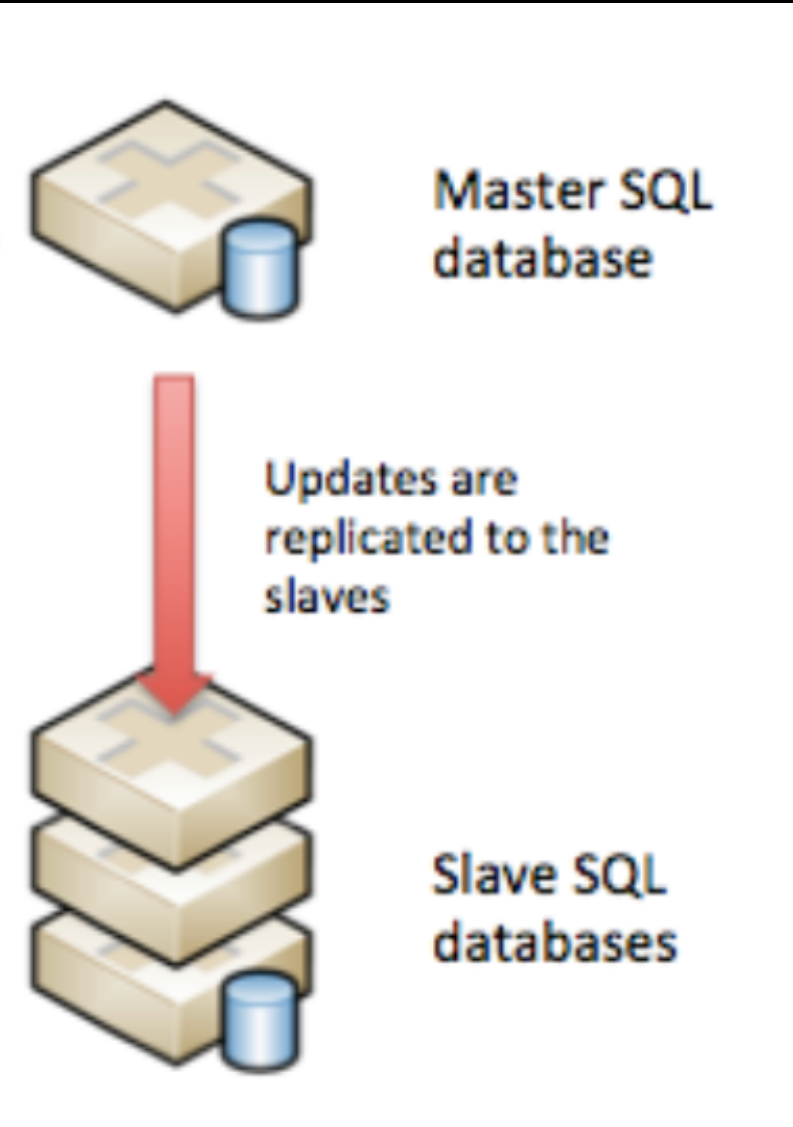


SINCRONIZACION DE INSTANCIAS

MAESTRO

ESCLAVO 1

ESCLAVO 1



```
ubuntu@ip-172-31-46-96 ~  
sudo mysql -u root -p  
Copyright (c) 2000, 2024, Oracle and/or its affiliates.  
  
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affiliates. Other names may be trademarks of their respective  
owners.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
mysql> show databases;  
+-----+  
| Database |  
+-----+  
| api      |  
| information_schema |  
| mysql    |  
| performance_schema |  
| prueba_replica |  
| sbench   |  
| sys      |  
+-----+  
7 rows in set (0.01 sec)  
  
mysql> use api;  
Reading table information for completion of table and column names  
You can turn off this feature to get a quicker startup with -A  
  
Database changed  
mysql> show tables;  
+-----+  
| Tables_in_api |  
+-----+  
| auth_group    |  
| auth_group_permissions |  
| auth_permission |  
| auth_user     |  
| auth_user_groups |  
| auth_user_user_permissions |  
| django_admin_log |  
| django_content_type |  
| django_migrations |  
| django_session  |  
| tasks_task     |  
+-----+  
11 rows in set (0.00 sec)
```

```
ubuntu@ip-172-31-37-117 ~  
sudo mysql -u root -p  
Copyright (c) 2000, 2024, Oracle and/or its affiliates.  
  
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affiliates. Other names may be trademarks of their respective  
owners.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
mysql> show databases;  
+-----+  
| Database |  
+-----+  
| api      |  
| information_schema |  
| mysql    |  
| performance_schema |  
| prueba_replica |  
| sbench   |  
| sys      |  
+-----+  
7 rows in set (0.01 sec)  
  
mysql> use api;  
Reading table information for completion of table and column names  
You can turn off this feature to get a quicker startup with -A  
  
Database changed  
mysql> show tables;  
+-----+  
| Tables_in_api |  
+-----+  
| auth_group    |  
| auth_group_permissions |  
| auth_permission |  
| auth_user     |  
| auth_user_groups |  
| auth_user_user_permissions |  
| django_admin_log |  
| django_content_type |  
| django_migrations |  
| django_session  |  
| tasks_task     |  
+-----+  
11 rows in set (0.00 sec)
```

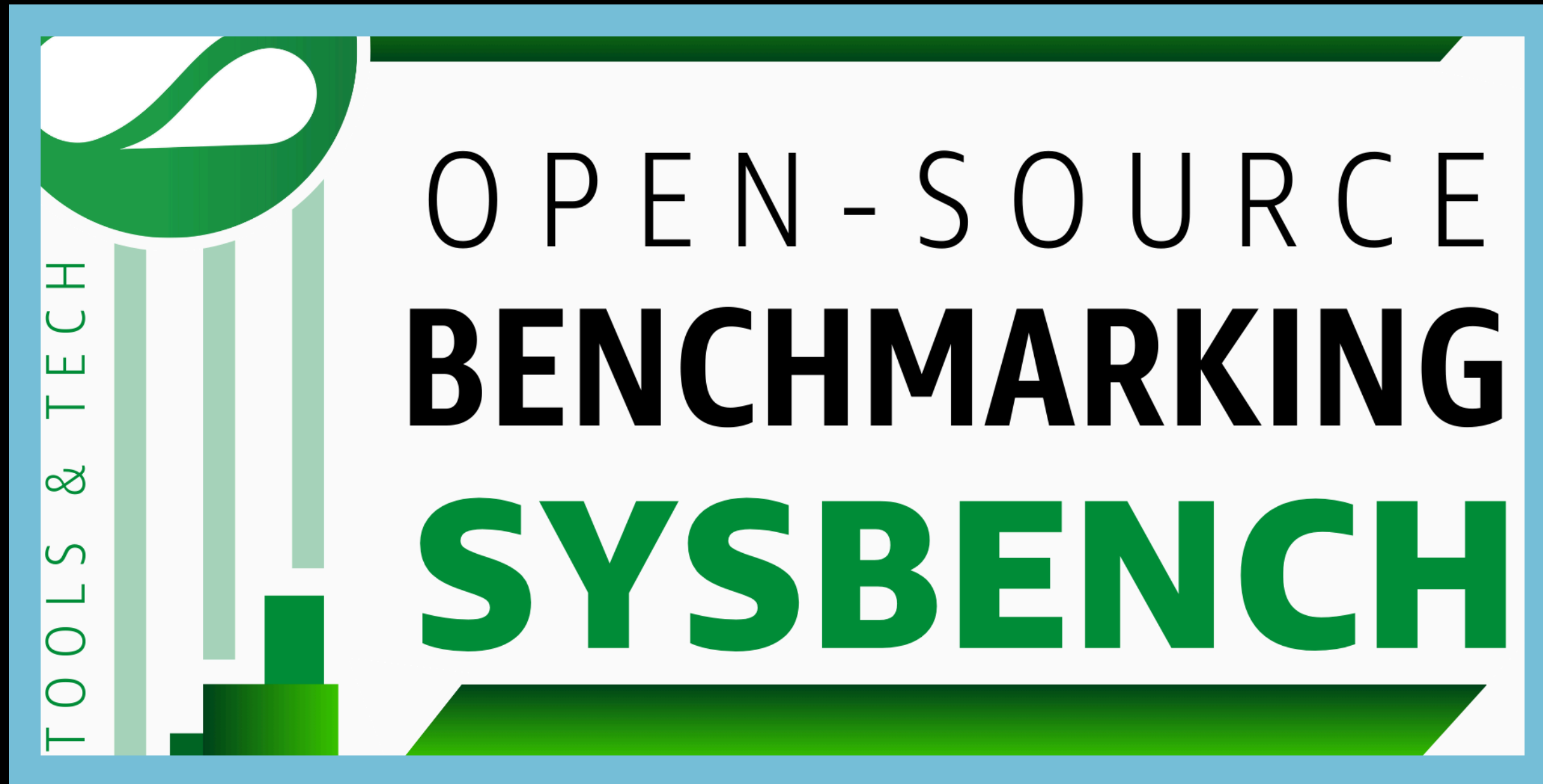
```
ubuntu@ip-172-31-38-216 ~  
sudo mysql -u root -p  
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affiliates. Other names may be trademarks of their respective  
owners.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
mysql> show databases;  
+-----+  
| Database |  
+-----+  
| api      |  
| information_schema |  
| mysql    |  
| performance_schema |  
| sbench   |  
| sys      |  
+-----+  
6 rows in set (0.01 sec)  
  
mysql> use api;  
Reading table information for completion of table and column names  
You can turn off this feature to get a quicker startup with -A  
  
Database changed  
mysql> show tables;  
+-----+  
| Tables_in_api |  
+-----+  
| auth_group    |  
| auth_group_permissions |  
| auth_permission |  
| auth_user     |  
| auth_user_groups |  
| auth_user_user_permissions |  
| django_admin_log |  
| django_content_type |  
| django_migrations |  
| django_session  |  
| tasks_task     |  
+-----+  
11 rows in set (0.00 sec)
```




SQL ROUTER

- ▶▶ LIGERO
- ▶▶ FLEXIBLE
- ▶▶ BALANCEA LA QUERIES
- ▶▶ TOLERANTE A FALLAS

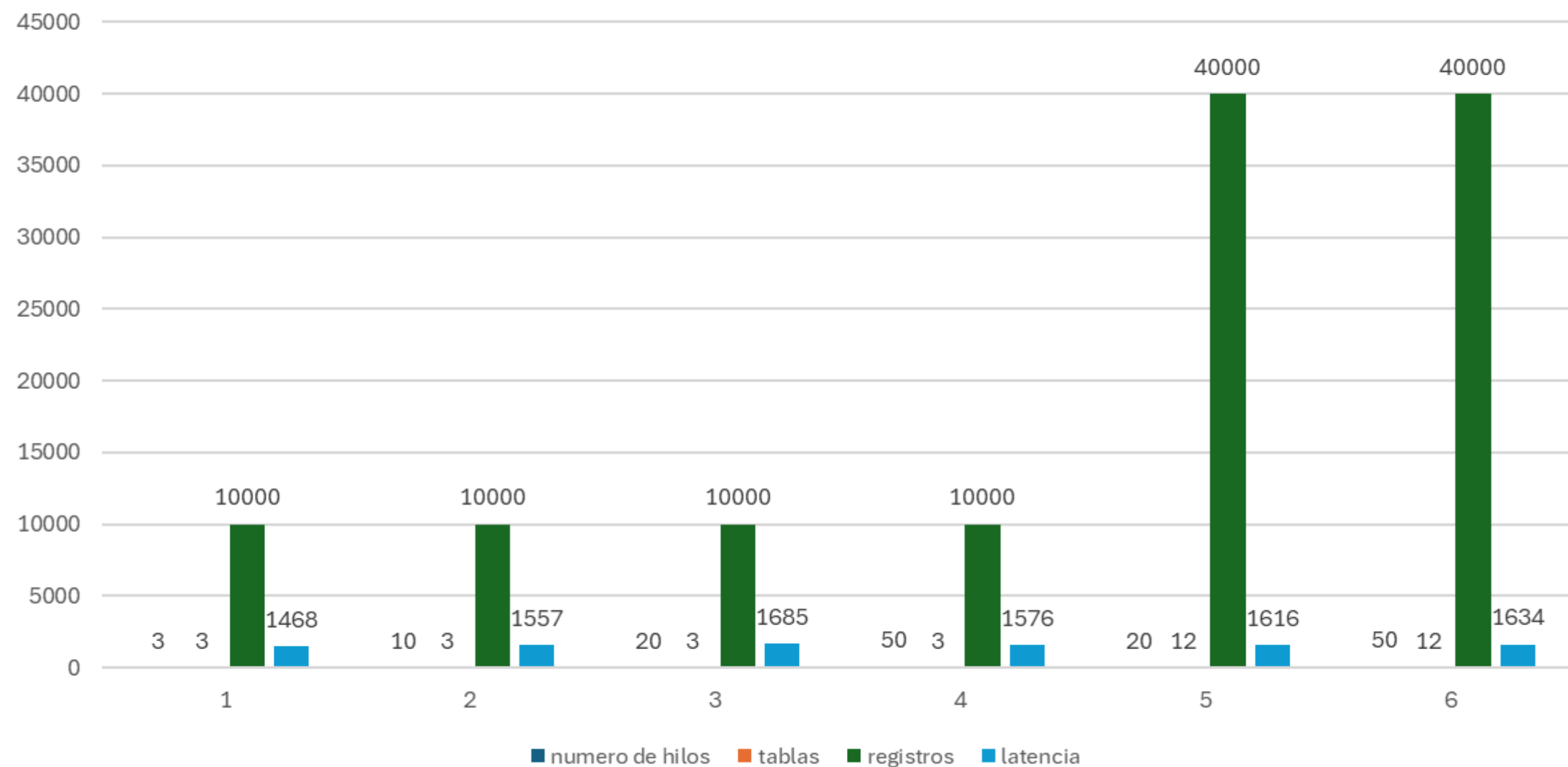
PRUEBAS



PRUEBAS DE LECTURA

```
Initializing worker threads...
Threads started!
SQL statistics:
  queries performed:
    read: 4578
    write: 0
    other: 654
    total: 5232
  transactions: 327 (29.81 per sec.)
  queries: 5232 (476.99 per sec.)
  ignored errors: 0 (0.00 per sec.)
  reconnects: 0 (0.00 per sec.)
General statistics:
  total time: 10.9650s
  total number of events: 327
Latency (ms):
  min: 1508.24
  avg: 1634.05
  max: 1805.01
  95th percentile: 1771.29
  sum: 534333.26
Threads fairness:
  events (avg/stddev): 6.5400/0.50
  execution time (avg/stddev): 10.6867/0.23
```

Pruebas de lectura



PRUEBAS DE ESCRITURA

Initializing worker threads...

Threads started!

SQL statistics:

queries performed:

read:

write:

other:

total:

transactions:

queries:

ignored errors:

reconnects:

0

6640

3320

9960

1660

9960

0

0

(154.36 per sec.)

(926.17 per sec.)

(0.00 per sec.)

(0.00 per sec.)

General statistics:

total time:

total number of events:

10.7502s

1660

Latency (ms):

min:

avg:

max:

95th percentile:

sum:

549.16

621.61

1048.35

682.06

1031872.51

Threads fairness:

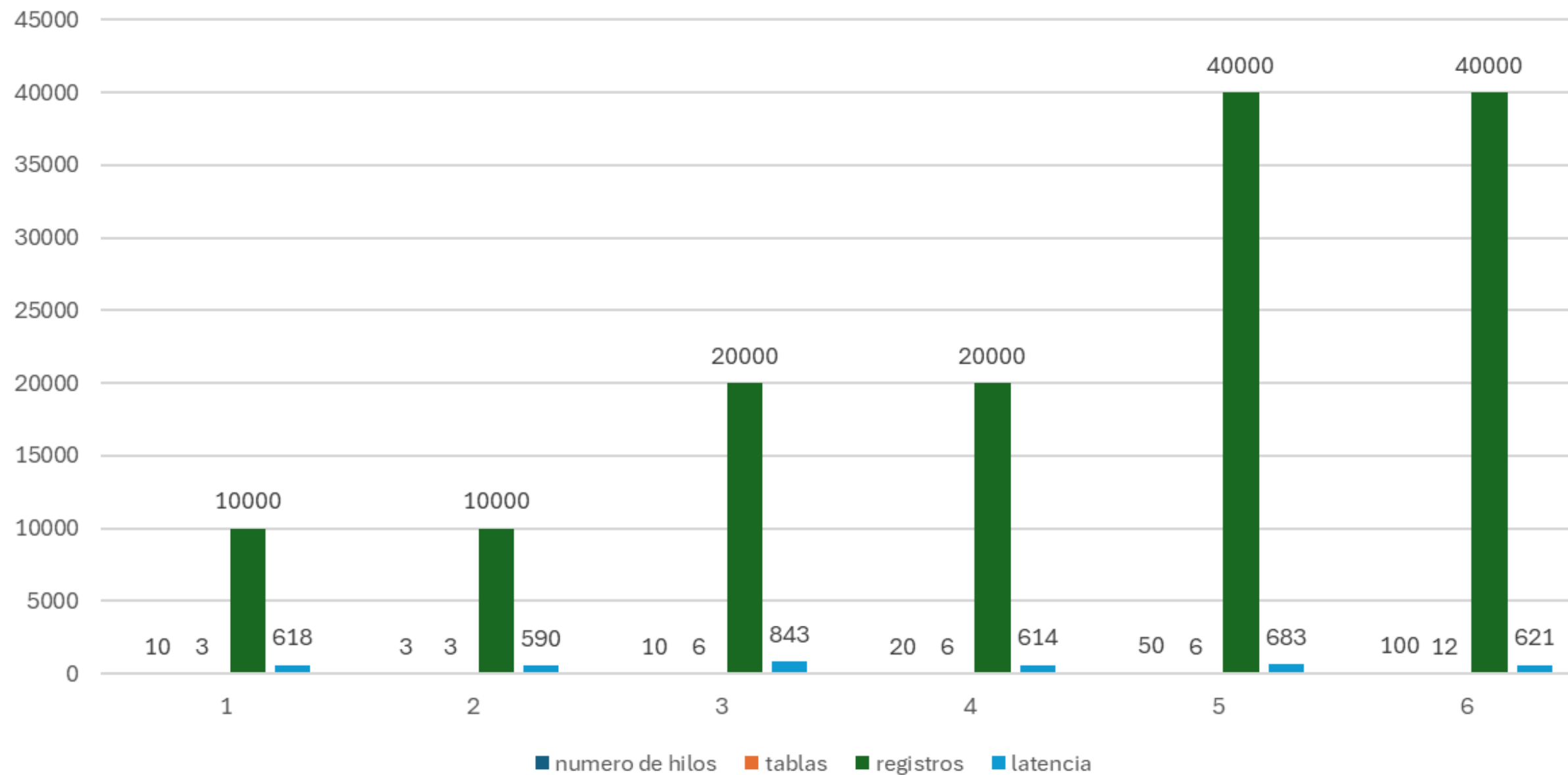
events (avg/stddev):

execution time (avg/stddev):

16,6000/1.08

10.3187/0.18

Pruebas de escritura





CONCLUSION

Este proyecto ofrece una solución confiable y escalable para gestionar bases de datos en un entorno de comercio electrónico en crecimiento. Mejoramos rendimiento, disponibilidad y seguridad mediante balanceo de carga, replicación maestro-esclavo y automatización en AWS. Esta implementación asegura un entorno robusto y preparado para futuras expansiones, optimizando el sistema para soportar el crecimiento continuo del negocio digital.



¡GRACIAS!

POR TOMARSE EL TIEMPO DE ESCUCCHAR
NUESTRA PRESENTACION