

OPTIMIZACIÓN DEL RENDIMIENTO: MONITORIZACIÓN Y OPTIMIZACIÓN

Utilizando el programa adecuado, codificarás la sentencia para la tarea de administración requerida:

1. Saber si el servidor está activo.
2. Muestra las variables de estado del servidor y sus valores.
3. Muestra la información de estado del motor Innodb.
4. Muestra la información de los flujos que están en ejecución, pero para más de 100 caracteres. No uses mysqladmin

Proporciona el resultado que te da la sentencia ejecutada.

SOLUCIÓN:

1)

#mysqladmin -u root -p ping

Rpta: mysql is alive → El servidor está activo.

2)

#mysqladmin -u root -p extended-status [> my_estado.txt]

Variable_name	Value
Aborted_clients	0
Aborted_connects	0
Binlog_cache_disk_use	0
Binlog_cache_use	0
Bytes_received	337
Bytes_sent	8311
Com_admin_commands	1
Com_assign_to_keycache	0
Com_alter_db	0
Com_alter_db_upgrade	0
Com_alter_event	0
Com_alter_function	0
Com_alter_procedure	0
Com_alter_server	0
Com_alter_table	0
Com_alter_tablespace	0
Com_analyze	0
Com_begin	0
Com_binlog	0
Com_call_procedure	0
Com_change_db	0
Com_change_master	0
Com_check	0
Com_checksum	0
Com_commit	0
Com_create_db	0
Com_create_event	0
Com_create_function	0
Com_create_index	0
Com_create_procedure	0
Com_create_server	0
Com_create_table	0
Com_create_trigger	0
Com_create_udf	0
Com_create_user	0
Com_create_view	0
Com_dealloc_sql	0
Com_delete	0
Com_delete_multi	0

Com_do	0	
Com_drop_db	0	
Com_drop_event	0	
Com_drop_function	0	
Com_drop_index	0	
Com_drop_procedure	0	
Com_drop_server	0	
Com_drop_table	0	
Com_drop_trigger	0	
Com_drop_user	0	
Com_drop_view	0	
Com_empty_query	0	
Com_execute_sql	0	
Com_flush	0	
Com_grant	0	
Com_ha_close	0	
Com_ha_open	0	
Com_ha_read	0	
Com_help	0	
Com_insert	0	
Com_insert_select	0	
Com_install_plugin	0	
Com_kill	0	
Com_load	0	
Com_lock_tables	0	
Com_optimize	0	
Com_preload_keys	0	
Com_prepare_sql	0	
Com_purge	0	
Com_purge_before_date	0	
Com_release_savepoint	0	
Com_rename_table	0	
Com_rename_user	0	
Com_repair	0	
Com_replace	0	
Com_replace_select	0	
Com_reset	0	
Com_resignal	0	
Com_revoke	0	
Com_revoke_all	0	
Com_rollback	0	
Com_rollback_to_savepoint	0	
Com_savepoint	0	
Com_select	0	
Com_set_option	0	
Com_signal	0	
Com_show_authors	0	
Com_show_binlog_events	0	
Com_show_binlogs	0	
Com_show_charsets	0	
Com_show_collations	0	
Com_show_contributors	0	
Com_show_create_db	0	
Com_show_create_event	0	
Com_show_create_func	0	
Com_show_create_proc	0	
Com_show_create_table	0	
Com_show_create_trigger	0	
Com_show_databases	0	
Com_show_engine_logs	0	
Com_show_engine_mutex	0	
Com_show_engine_status	0	
Com_show_events	0	

Com_show_errors	0	
Com_show_fields	0	
Com_show_function_status	0	
Com_show_grants	0	
Com_show_keys	0	
Com_show_master_status	0	
Com_show_new_master	0	
Com_show_open_tables	0	
Com_show_plugins	0	
Com_show_privileges	0	
Com_show_procedure_status	0	
Com_show_processlist	0	
Com_show_profile	0	
Com_show_profiles	0	
Com_show_relaylog_events	0	
Com_show_slave_hosts	0	
Com_show_slave_status	0	
Com_show_status	2	
Com_show_storage_engines	0	
Com_show_table_status	0	
Com_show_tables	0	
Com_show_triggers	0	
Com_show_variables	0	
Com_show_warnings	0	
Com_slave_start	0	
Com_slave_stop	0	
Com_stmt_close	0	
Com_stmt_execute	0	
Com_stmt_fetch	0	
Com_stmt_prepare	0	
Com_stmt_reprepare	0	
Com_stmt_reset	0	
Com_stmt_send_long_data	0	
Com_truncate	0	
Com_uninstall_plugin	0	
Com_unlock_tables	0	
Com_update	0	
Com_update_multi	0	
Com_xa_commit	0	
Com_xa_end	0	
Com_xa_prepare	0	
Com_xa_recover	0	
Com_xa_rollback	0	
Com_xa_start	0	
Compression	OFF	
Connections	4	
Created_tmp_disk_tables	0	
Created_tmp_files	5	
Created_tmp_tables	2	
Delayed_errors	0	
Delayed_insert_threads	0	
Delayed_writes	0	
Flush_commands	1	
Handler_commit	0	
Handler_delete	0	
Handler_discover	0	
Handler_prepare	0	
Handler_read_first	3	
Handler_read_key	0	
Handler_read_last	0	
Handler_read_next	0	
Handler_read_prev	0	
Handler_read_rnd	0	

Handler_read_rnd_next	325	
Handler_rollback	0	
Handler_savepoint	0	
Handler_savepoint_rollback	0	
Handler_update	0	
Handler_write	308	
Innodb_buffer_pool_pages_data	392	
Innodb_buffer_pool_pages_dirty	0	
Innodb_buffer_pool_pages_flushed	0	
Innodb_buffer_pool_pages_free	2616	
Innodb_buffer_pool_pages_misc	0	
Innodb_buffer_pool_pages_total	3008	
Innodb_buffer_pool_read_ahead	0	
Innodb_buffer_pool_read_ahead_evicted	0	
Innodb_buffer_pool_read_requests	5427	
Innodb_buffer_pool_reads	393	
Innodb_buffer_pool_wait_free	0	
Innodb_buffer_pool_write_requests	0	
Innodb_data_fsyncs	3	
Innodb_data_pending_fsyncs	0	
Innodb_data_pending_reads	0	
Innodb_data_pending_writes	0	
Innodb_data_read	8622080	
Innodb_data_reads	403	
Innodb_data_writes	3	
Innodb_data_written	1536	
Innodb_dblwr_pages_written	0	
Innodb_dblwr_writes	0	
Innodb_have_atomic_builtins	ON	
Innodb_log_waits	0	
Innodb_log_write_requests	0	
Innodb_log_writes	1	
Innodb_os_log_fsyncs	3	
Innodb_os_log_pending_fsyncs	0	
Innodb_os_log_pending_writes	0	
Innodb_os_log_written	512	
Innodb_page_size	16384	
Innodb_pages_created	0	
Innodb_pages_read	392	
Innodb_pages_written	0	
Innodb_row_lock_current_waits	0	
Innodb_row_lock_time	0	
Innodb_row_lock_time_avg	0	
Innodb_row_lock_time_max	0	
Innodb_row_lock_waits	0	
Innodb_rows_deleted	0	
Innodb_rows_inserted	0	
Innodb_rows_read	0	
Innodb_rows_updated	0	
Innodb_truncated_status_writes	0	
Key_blocks_not_flushed	0	
Key_blocks_unused	22365	
Key_blocks_used	0	
Key_read_requests	0	
Key_reads	0	
Key_write_requests	0	
Key_writes	0	
Last_query_cost	0.000000	
Max_used_connections	1	
Not_flushed_delayed_rows	0	
Open_files	0	
Open_streams	0	
Open_table_definitions	33	

Open_tables	0	
Opened_files	76	
Opened_table_definitions	33	
Opened_tables	33	
Performance_schema_cond_classes_lost	0	
Performance_schema_cond_instances_lost	0	
Performance_schema_file_classes_lost	0	
Performance_schema_file_handles_lost	0	
Performance_schema_file_instances_lost	0	
Performance_schema_locker_lost	0	
Performance_schema_mutex_classes_lost	0	
Performance_schema_mutex_instances_lost	0	
Performance_schema_rwlock_classes_lost	0	
Performance_schema_rwlock_instances_lost	0	
Performance_schema_table_handles_lost	0	
Performance_schema_table_instances_lost	0	
Performance_schema_thread_classes_lost	0	
Performance_schema_thread_instances_lost	0	
Prepared_stmt_count	0	
Qcache_free_blocks	0	
Qcache_free_memory	0	
Qcache_hits	0	
Qcache_inserts	0	
Qcache_lowmem_prunes	0	
Qcache_not_cached	0	
Qcache_queries_in_cache	0	
Qcache_total_blocks	0	
Queries	4	
Questions	4	
Rpl_status	AUTH_MASTER	
Select_full_join	0	
Select_full_range_join	0	
Select_range	0	
Select_range_check	0	
Select_scan	2	
Slave_heartbeat_period	0.000	
Slave_open_temp_tables	0	
Slave_received_heartbeats	0	
Slave_retried_transactions	0	
Slave_running	OFF	
Slow_launch_threads	0	
Slow_queries	0	
Sort_merge_passes	0	
Sort_range	0	
Sort_rows	0	
Sort_scan	0	
Ssl_accept_renegotiates	0	
Ssl_accepts	0	
Ssl_callback_cache_hits	0	
Ssl_cipher		
Ssl_cipher_list		
Ssl_client_connects	0	
Ssl_connect_renegotiates	0	
Ssl_ctx_verify_depth	0	
Ssl_ctx_verify_mode	0	
Ssl_default_timeout	0	
Ssl_finished_accepts	0	
Ssl_finished_connects	0	
Ssl_session_cache_hits	0	
Ssl_session_cache_misses	0	
Ssl_session_cache_mode	NONE	
Ssl_session_cache_overflows	0	
Ssl_session_cache_size	0	

Ssl_session_cache_timeouts	0	
Ssl_sessions_reused	0	
Ssl_used_session_cache_entries	0	
Ssl_verify_depth	0	
Ssl_verify_mode	0	
Ssl_version		
Table_locks_immediate	36	
Table_locks_waited	0	
Tc_log_max_pages_used	0	
Tc_log_page_size	0	
Tc_log_page_waits	0	
Threads_cached	0	
Threads_connected	1	
Threads_created	1	
Threads_running	1	
Uptime	5117	
Uptime_since_flush_status	5117	

2)

mysql>show variables like '%slow_query_log%';

3)Para ejecutar los siguientes comandos puede ser útil al alumnado que ejecute primero:
mysql> tee myfichero.txt;
para que se almacene en ese fichero la salida de ejecutar las sentencias .

mysql> SHOW ENGINE InnoDB STATUS

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InnoDB |
=====
111114 11:41:54 INNODB MONITOR OUTPUT
=====
Per second averages calculated from the last 8 seconds
-----
BACKGROUND THREAD
-----
srv_master_thread loops: 1 1_second, 1 sleeps, 0 10_second, 1 background, 1 flush
srv_master_thread log flush and writes: 1
-----
SEMAPHORES
-----
OS WAIT ARRAY INFO: reservation count 2, signal count 2
Mutex spin waits 0, rounds 0, OS waits 0
RW-shared spins 2, rounds 60, OS waits 2
RW-excl spins 0, rounds 0, OS waits 0
Spin rounds per wait: 0.00 mutex, 30.00 RW-shared, 0.00 RW-excl
-----
TRANSACTIONS
-----
Trx id counter 3B00
Purge done for trx's n:o < 372B undo n:o < 0
History list length 120
LIST OF TRANSACTIONS FOR EACH SESSION:
---TRANSACTION 0, not started, OS thread id 3480
MySQL thread id 5, query id 18 localhost 127.0.0.1 root
show engine innodb status
-----
FILE I/O
-----
I/O thread 0 state: wait Windows aio (insert buffer thread)
I/O thread 1 state: wait Windows aio (log thread)

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I/O thread 2 state: wait Windows aio (read thread)
I/O thread 3 state: wait Windows aio (read thread)
I/O thread 4 state: wait Windows aio (read thread)
I/O thread 5 state: wait Windows aio (read thread)
I/O thread 6 state: wait Windows aio (write thread)
I/O thread 7 state: wait Windows aio (write thread)
I/O thread 8 state: wait Windows aio (write thread)
I/O thread 9 state: wait Windows aio (write thread)
Pending normal aio reads: 0 [0, 0, 0, 0] , aio writes: 0 [0, 0, 0, 0] ,
ibuf aio reads: 0, log i/o's: 0, sync i/o's: 0
Pending flushes (fsync) log: 0; buffer pool: 0
403 OS file reads, 3 OS file writes, 3 OS fsyncs
0.00 reads/s, 0 avg bytes/read, 0.00 writes/s, 0.00 fsyncs/s

INSERT BUFFER AND ADAPTIVE HASH INDEX

Ibuf: size 1, free list len 0, seg size 2, 0 merges
merged operations:
insert 0, delete mark 0, delete 0
discarded operations:
insert 0, delete mark 0, delete 0
Hash table size 195193, node heap has 0 buffer(s)
0.00 hash searches/s, 0.00 non-hash searches/s

LOG

Log sequence number 6778549
Log flushed up to 6778549
Last checkpoint at 6778549
0 pending log writes, 0 pending chkp writes
8 log i/o's done, 0.00 log i/o's/second

BUFFER POOL AND MEMORY

Total memory allocated 49938432; in additional pool allocated 0
Dictionary memory allocated 26163
Buffer pool size 3008
Free buffers 2616
Database pages 392
Old database pages 0
Modified db pages 0
Pending reads 0
Pending writes: LRU 0, flush list 0, single page 0
Pages made young 0, not young 0
0.00 youngs/s, 0.00 non-youngs/s
Pages read 392, created 0, written 0
0.00 reads/s, 0.00 creates/s, 0.00 writes/s
No buffer pool page gets since the last printout
Pages read ahead 0.00/s, evicted without access 0.00/s
LRU len: 392, unzip_LRU len: 0
I/O sum[0]:cur[0], unzip sum[0]:cur[0]

ROW OPERATIONS

0 queries inside InnoDB, 0 queries in queue
1 read views open inside InnoDB
Main thread id 1796, state: waiting for server activity
Number of rows inserted 0, updated 0, deleted 0, read 0
0.00 inserts/s, 0.00 updates/s, 0.00 deletes/s, 0.00 reads/s

END OF INNODB MONITOR OUTPUT

mysql> SHOW FULL PROCESSLIST

Id	User	Host	db	Command	Time	State	Info
5	root	localhost:2205	NULL	Query	0	NULL	show full processlist

1 row in set (0.00 sec)

5)

mysql>ALTER TABLE jugadores
ADD INDEX idx_apellido (apellido);

mysql>SHOW INDEX FROM jugadores;

6)

mysql>EXPLAIN SELECT codalumno, nombre, apellido, puesto, clase
FROM jugadores
WHERE nombre='Olga';

mysql>ALTER TABLE jugadores
ADD INDEX idx_nombre (nombre);