MySQL client

MySQL shell and dump

CONCEPTS

A statement runs only at its terminator: ; or \G. Backslash commands like \q and \s take effect at once and need no semicolon.

Server host:3306
Database USE <db>
Table rows, columns, indexes

Passing -p<password> leaks it to ps and shell history. Use bare -p to be prompted, or a login path from mysql_config_editor.

CONNECT

`mysql -u <user> -p`
Connect to localhost, prompt for password

`mysql -u <user> -p -h <host> -P <port> <db>`
Connect to a remote server and database

`mysql -e "<sql>" <db>`
Run a statement and exit

`mysql -S <socket>`
Connect through a Unix socket

`mysql --protocol=TCP -h 127.0.0.1`
Force TCP instead of the socket

CONNECT (cont.)

`mysql_config_editor set --login-path=<name> -u <user> -h <host> -p`
Store credentials in ~/.mylogin.cnf

`mysql --login-path=<name>`
Connect with a stored login path

`mysql --safe-updates`
Refuse UPDATE/DELETE without key or LIMIT

SHELL COMMANDS

`\s`
Show connection and server status

`\u <db>`
Switch database

`\G`
Run and print vertically

`\c`
Cancel the statement being typed

`\q`
Quit

`\. <file.sql>`
Run SQL from a file

`\e`
Edit the statement in $EDITOR

`\P <pager>`
Pipe output through a pager

SHELL COMMANDS (cont.)

`DELIMITER //`
Change the statement terminator

INSPECT

`SHOW DATABASES;`
List databases

`SHOW TABLES;`
List tables in the current database

`DESCRIBE <table>;`
Show columns, types and keys

`SHOW CREATE TABLE <table>\G`
Show the full DDL

`SHOW INDEX FROM <table>;`
List indexes

`SHOW FULL PROCESSLIST;`
See running queries

`SHOW VARIABLES LIKE '<pattern>';`
Look up server variables

`SELECT VERSION(), DATABASE(), CURRENT_USER();`
Server version, schema, account

QUERY

`SELECT * FROM <table> LIMIT 10;`
Peek at rows

QUERY (cont.)

`SELECT COUNT(*) FROM <table>;`
Count rows

`EXPLAIN SELECT ...;`
Show the query plan

`EXPLAIN ANALYZE SELECT ...;`
Run and time each plan step

`START TRANSACTION;`
Begin a transaction

`ROLLBACK;`
Undo the open transaction

`COMMIT;`
Make the transaction permanent

`CREATE INDEX <idx> ON <table> (<col>);`
Add an index

EXPLAIN type column, best first

type	Meaning
const	one row via key
ref	index lookup
range	index range scan
index	full index scan
ALL	full table scan

USERS & GRANTS

`CREATE USER '<user>'@'<host>' IDENTIFIED BY '<pw>';`
Create an account

`GRANT ALL ON <db>.* TO '<user>'@'<host>';`
Grant on one database

USERS & GRANTS (cont.)

`SHOW GRANTS FOR '<user>'@'<host>';`
List an account's privileges

`REVOKE <priv> ON <db>.* FROM '<user>'@'<host>';`
Remove privileges

OUTPUT

`mysql -B -N -e "<sql>"`
Tab-separated rows, no header

DUMP & RESTORE

`mysqldump <db> > <file.sql>`
Dump one database

`mysqldump --single-transaction <db> > <file.sql>`
Consistent InnoDB dump without locks

`mysqldump --no-data <db>`
Schema only

`mysqldump --routines --triggers --events <db>`
Include stored code

`mysql <db> < <file.sql>`
Restore a dump

`mysqldump <db> | gzip > <file.sql.gz>`
Compressed dump

`gunzip -c <file.sql.gz> | mysql <db>`
Restore a compressed dump