

# What's New in MySQL 5.1

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# History of MySQL 5.1

- First Nov 29 2005
- RC Sept 24 2007
- GA Nov 14 2008

# History Compared with 5.0

## 5.1

- First Nov 29 2005
- RC Sept 24 2007
- GA Nov 14 2008

## 5.0

- Alpha Dec 22 2003
- RC Sept 22 2005
- GA Oct 19 2005



# New in 5.1

- Partitioning
- Row-based replication
- Plugin API

# New in 5.1 (part 2)

- Event Scheduler
- Log tables
- INFORMATION\_SCHEMA
  - PROCESSLIST
  - ENGINES

# New in 5.1 (part 3)

- TRIGGER privilege
- Prepared statements can use query cache
- XPath support
  - ExtractValue
  - UpdateXML

# New Tools

- mysqlslap
- mysql\_upgrade
  - mysqlcheck
    - --fix-db-names, --fix-table-names
    - --check-upgrade
  - CHECK TABLE FOR UPGRADE

# New Tool Functionality

- mysqldump
  - --replace
  - --single-transaction does not use BEGIN
  - --master-data changes
- mysqlbinlog
  - --server-id
  - --base64-output
  - --dump-date, --skip-dump-date
  - --verbose, -v





# New Tool Functionality (part II)

- `mysqlimport`
  - `--use-threads=N`
- `mysql.server`
  - `--service-startup-timeout`
- `mysqladmin`
  - `--no-beep`

# Storage Engine Changes

- BDB
- FEDERATED
- have\_isam

# Incompatible Changes

- `mysqld_safe` only checks for `mysqld`
  - not `msyqld-max`
- system variables and binary logs
- Change in handling prepared statements; may need to upgrade client library

# Configuration File Changes

- `table_cache` is now `table_open_cache`
- `tmp_table_size` default changed
- `max_connections` default changed



# Configuration File Changes (part II)

- `have_raid` is removed
- `--master-%` deprecated
- `--one-thread` gone, `--thread-handling` added

# Configuration File Changes (part III)

- hostname
- Error logging
  - --syslog, --skip-syslog
  - --syslog-tag=tag
- --innodb\_log\_arch\_dir removed

# New Parameters

- `table_definition_cache`
- `myisam_use_mmap`
- `binlog_format`, `binlog_row_event_max_size`

# New Parameters (part II)

- `max_prepared_stmt_count`
- `Prepared_stmt_count` (global status variable)
- `innodb_stats_on_metadata`



# New Parameters (part III)

- old
- `--skip-write-binlog`
- plugins
  - `--loose-x`

# New Parameters (part IV)

- `--slave-exec-mode`
  - STRICT, IDEMPOTENT
- `Uptime_since_flush_status`
- `--report-%`

# New Features

- Meaningful stack traces
- charset on mysql commandline

# New Features

- SHOW AUTHORS
- SHOW PROFILE, SHOW PROFILES
  - INFORMATION\_SCHEMA.PROFILING
- SHOW CONTRIBUTORS

# Important Bugfixes

- BLACKHOLE transactions
- FULLTEXT search and apostrophes
- INFORMATION\_SCHEMA uses less memory
- --replicate-*%*-table options

# New Functionalities

- Faster ALTER TABLE for some commands
- RAND() can take non-constant initializers
- ARCHIVE supports AUTO\_INCREMENT



# New Functionalities (part II)

- MySQL now escapes identifiers
- FULLTEXT search
  - IN NATURAL LANGUAGE MODE
  - .... WITH QUERY EXPANSION
- Stored routines allow DEFINER

# New Functionalities (part III)

- CHANGE MASTER TO
  - MASTER\_SSL\_VERIFY\_SERVER\_CERT = {0|1}
- PAD\_CHAR\_TO\_FULL\_LENGTH
- long\_query\_time
  - microseconds
  - 0



# New Functionalities (part IV)

- `--log-slow-slave-statements`
- `--min_examined_row_limit`
- `--innodb_autoinc_lock_mode`

# Deprecated Features

- SHOW INNODB STATUS
- SHOW MUTEX STATUS
- SHOW [BDB] LOGS

# Deprecated Features (part II)

- TYPE as a synonym for ENGINE
  - @@table\_type
  - SHOW TABLE TYPES
- --skip-thread-priority
- --log, --log-slow-queries

# Package Changes

- mysqld-debug included
- safe\_mysql excluded
- mysqldumpslow part of server, not client
- MySQL Cluster is a separate product

# New Collations

- cp1250\_polish\_ci
- utf8\_hungarian\_ci
- ucs2\_hungarian\_ci

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