

PmaControl — April 2026 Sprint Recap: 114 Commits, MySQL 8.4, Binlog Analysis, IPv6

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PMACONTROL RELEASE MYSQL MARIADB REPLICATION BINLOG IPV6 MONITORING ARCHITECTURE

Sprint Avril 2026

PmaControl — MySQL/MariaDB Supervision Platform

114

COMMITTS

266

TESTS

35

TICKETS

0

REGRESSIONS

MySQL 8.4

REPLICA syntax, SET PERSIST, GTID migration

Binlog Analysis

Volume/s, treemaps, DDL, recommendations, cache

GeoIP IPv4 + IPv6

2.6M ranges in MariaDB, lookup < 1ms

Multi-Source Replication

Tabs per channel, setup form, filtered graphs

Group Replication

PRIMARY/SECONDARY from performance_schema

ReadOnly Role

134 actions whitelisted, zero wildcards

github.com/PmaControl/PmaControl — t.me/pmacontrol

By the Numbers

- **114 commits** in 4 days
- **266 PHPUnit tests**, 738 assertions
- **35 GitHub tickets** addressed (20 closed, 15 open with proposed solution)
- **12 new features**
- **0 regressions** (all tests pass)

What's New

1. Full MySQL 8.4 Compatibility

MySQL 8.4 removed the `SLAVE` commands in favor of `REPLICA`. PmaControl now automatically detects the fork (MariaDB vs MySQL) and uses the correct syntax:

Action	MariaDB	MySQL 8.4+
Stop replication	<code>STOP SLAVE 'conn'</code>	<code>STOP REPLICA FOR CHANNEL 'conn'</code>
Change source	<code>CHANGE MASTER TO ...</code>	<code>CHANGE REPLICATION SOURCE TO ...</code>
Parallel threads	<code>slave_parallel_threads</code>	<code>replica_parallel_workers</code>
Master status	<code>SHOW MASTER STATUS</code>	<code>SHOW BINARY LOG STATUS</code>
GTID	<code>MASTER_USE_GTID = slave_pos</code>	<code>SET PERSIST gtid_mode = ON (4 steps)</code>

Enabling GTID on MySQL requires a progressive migration (`OFF` → `OFF_PERMISSIVE` → `ON_PERMISSIVE` → `ON`) on the master then the slave. PmaControl handles everything automatically, including `SET PERSIST` for persistence without touching `my.cnf`.

2. Binlog Analysis

New binlog analysis tool accessible from the replication page of each slave. Select a time range, and PmaControl:

1. Downloads binlog files via the MySQL protocol (like an IO thread)
2. Parses GTID events (parallelism, transaction sizes)
3. Counts DML per table (INSERT/UPDATE/DELETE)
4. Calculates volume per second
5. Detects DDL (ALTER TABLE, DROP, etc.)
6. Generates recommendations based on the actual config of both the master and the slave

Interactive charts:

- Volume KB/s + replication lag (dual Y-axis, synchronized zoom)
- Transactions/second + threads_running on master and slave
- DML treemaps by database and table (recalculated on zoom)
- DDL table color-coded by type (ALTER=orange, DROP=red, CREATE=green)

Smart caching: downloaded binlogs are stored in `data/binlog_analysis/{server_id}/` with a 30-day TTL. An analysis on the same time range is near-instantaneous.

Security: MySQL credentials are no longer visible in `ps aux` — a temporary `.my.cnf` file with `chmod 0600` is used instead.

3. Multi-Source Replication

MariaDB multi-source servers (like `production_all` which replicates from `production_fr`, `production_uk`, `production_ro`) now display:

- **Tabs:** one per replication channel + a "+" tab to add a new source
- **Setup form:** complete CHANGE MASTER (host, port, user, password, GTID, SSL, `replicate_do_db`)
- **Filtered charts:** each tab only shows lag data for its channel

4. GeoIP IPv4 + IPv6

Country flags on the servers page now work with IPv6 addresses. The full GeoLite2 ranges (650K IPv4 + 1.95M IPv6 = 2.6M ranges) are imported into MariaDB for SQL lookups < 1ms.

5. Group Replication / InnoDB Cluster

New page under the Architecture > Group Replication menu:

- Reliable role detection of PRIMARY/SECONDARY via `performance_schema.replication_group_members`
- Display in the Dot3 graph (subgroups: Primary in green / Replica in blue)
- ONLINE/RECOVERING/ERROR/OFFLINE state with colors

6. Redesigned Home Dashboard

The home page now displays:

- KPIs: number of servers, availability (%), replication (%), daemons
- Alerts: list of down servers (monitored only)
- Distribution: environments, clients, versions (horizontal bars)
- Daemons: compact grid with running/stopped/error badges

7. ReadOnly Role

New `ReadOnly` role (`group_id=10`) with **134 explicitly allowed actions**, no wildcards.
Forbidden: all writes, replication control, passwords, debug, heavy queries on `information_schema`, daemon control.

8. Redesigned Pages

- **Client/index**: card grid with health bar, inline editing, monitoring toggle
- **Architecture/index**: dark blue gradient header, clean SVG grid
- **Slave/show**: multi-source tabs, Chart.js 4.5.1 charts with synchronized zoom

Bug Fixes

Security

- `connection_name` sanitization against SQL injection in 5 methods
- Whitelist of editable fields in `Client::update()`
- Password hidden from process lists (`--defaults-extra-file` instead of `--password=`)

Stability

- `ts_value` partitions desynchronized between tables (fix: per-table creation + today included)
- `Extraction2`: `sql_query_silent` for missing partitions
- Binlog analysis: stall detection instead of fixed timeout (120s without growth = kill)
- `testAccessReplication()`: added `BINLOG MONITOR` for MariaDB 10.5+
- `slave_connections_needed_for_purge=0` before binlog purge

UI

- Chart.js sparklines migrated from v2 to v4
- Canvas ID collision on multi-channel charts
- "Load previous day" always decrements even without data
- Erratic tooltips fixed (`nearest` mode instead of `index`)
- Sys schema column tooltips (100+ columns documented)

Roadmap — What's Left

Open Tickets (35)

Debian 13 Installer (7 tickets):

- Predictable passwords (#123)
- Cleartext credentials in `/tmp/config.json` (#117)
- Private SSH key in the repo (#114)
- MariaDB version ignored (#120)
- `/var/www` ownership (#119)

Binlog Analysis:

- Gantt timeline aligned with charts (#106)
- Analysis launched twice (#122)
- Non-atomic write cache for MySQL logs (#121)

Data Quality:

- Lag normalization `NULL` → 0 (#113)
- SSL state lost in MySQL 8 normalization (#116)
- Home dashboard: SingleStore classified as MySQL (#130), PID reuse (#129), `seconds_behind_source` (#126)

Legacy:

- Rename database with collation (#26)
- LDAP encoding (#40)
- Table names with hyphens in Graphviz (#65)
- `SqlFormatter` deprecated `strlen` (#72)

Planned Improvements

- **Time-series aggregation:** raw → 1min → 1hr → 1day with `stddev` for anomaly detection
- **Alerting:** Telegram/email notifications for lag, server down, disk space
- **Plugin system:** install/uninstall from GitHub
- **REST API:** metrics exposure for external integration

Links

- **GitHub:** github.com/PmaControl/PmaControl
 - **Telegram:** t.me/pmacontrol
 - **Open tickets:** [Issues](#)
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PmaControl is an open-source MariaDB/MySQL monitoring tool. Contributions welcome.