

# Lessons on data and observability

- **Match storage to the workload:** databases get local disk on dedicated VMs, never NFS.
- **Tune for the box you have:** give the engine the RAM, tell it the disk is SSD, log slow queries.
- **MariaDB  $\neq$  MySQL:** running both proved it. Check settings against your actual engine (the `innodb_log_file_size` vs `innodb_redo_log_capacity` trap) — and check your config's `load order` too (`z99-` beats `99-` because the include dir loads by filename).
- **Per-app credentials, always:** own database, own user, own password; admin accounts stay local-only.
- **Multi-line logs need a multiline parser:** a slow-query entry spans several lines, so each multi-line source gets its own Promtail job with a multiline stage — never globbed with single-line files. And mind file permissions: MySQL writes its slow log owned by the `mysql` group, so the log shipper shipped *nothing* until it was added to that group. A log you can't read is a log you don't have.
- **Ship every log to one place:** node logs, pod logs, and all three databases' logs land in Loki and surface in Grafana. Observability you set up *before* you need it is the kind that's actually there when you do.

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