



Open Source Observability for Databases

Percona Monitoring and Management (PMM)

Tibor Korocz

Observability Tech Lead

The World We Monitor

Heart of Applications

Databases power every modern application and service

Deep Observability

Understanding performance, cost, and risk at the database level

Beyond Infrastructure

Most tools stop at infrastructure – PMM goes deeper into database insights



What is PMM?

Percona Monitoring and Management (PMM) is an open-source platform for comprehensive database observability and management.

Covers MySQL, PostgreSQL, MongoDB, Valkey, and more with metrics, query analytics, alerting, and intelligent advisors.

100% Open Source

Community-driven development

No Lock-In

Freedom from vendor licensing

Multi-Database

Unified observability across platforms

PMM in the Open Source Ecosystem

PMM integrates and extends - not replaces - the open observability stack

Layer	Technology
Metrics	VictoriaMetrics
Visualization	Grafana
Query Analytics Storage	ClickHouse
Exporters	node_exporter, mysqld_exporter, postgres_exporter, mongo_exporter, redis/valkey_exporter, qan_exporter
Orchestration	Nomad
Automation Partner	Internal Management solution based on Nomad

PMM Architecture Overview

PMM Server

Central intelligence hub with VictoriaMetrics, Grafana, and ClickHouse

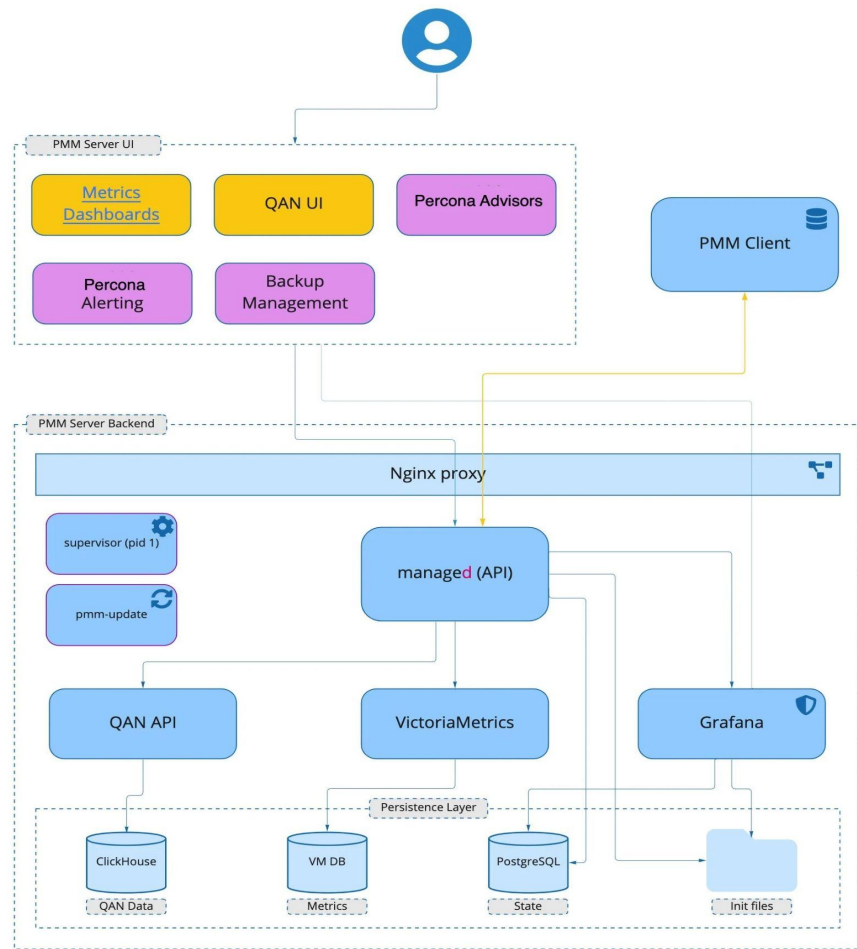
PMM Client

Lightweight agent collecting metrics and query data from databases

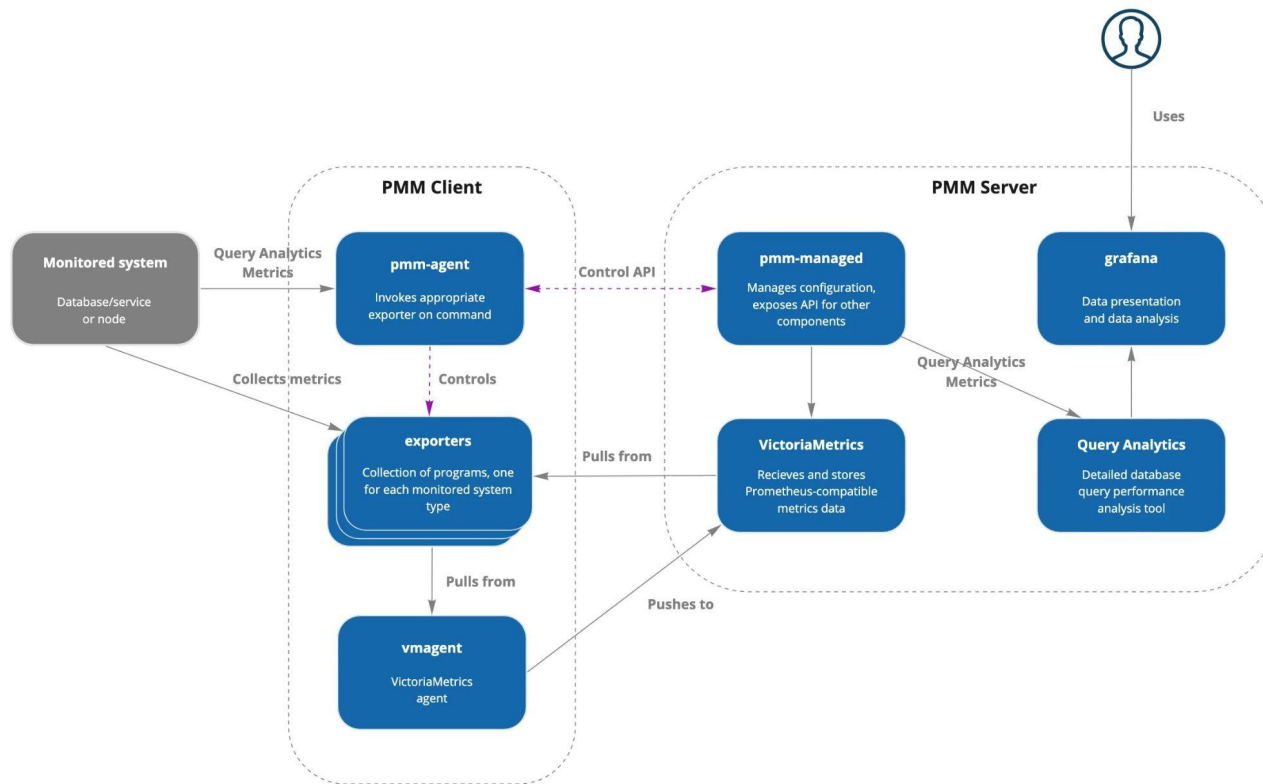
Insights

Dashboards and advisors powered by extensible APIs

PMM Server - Component-Based View



PMM Client-Server Interactions



What's New and Exciting

2025-2026 Roadmap

High Availability

PMM in HA mode – resilient and scalable for enterprise deployments

Real-Time Query Analytics

Live insights into currently running queries across all databases

AI & Automation

Smart advisors, NLP troubleshooting, and predictive tuning capabilities

High Availability Mode

Production-Grade for Enterprise Scale

01

Active/Standby Architecture

Shared state across cluster nodes

02

Automatic Failover

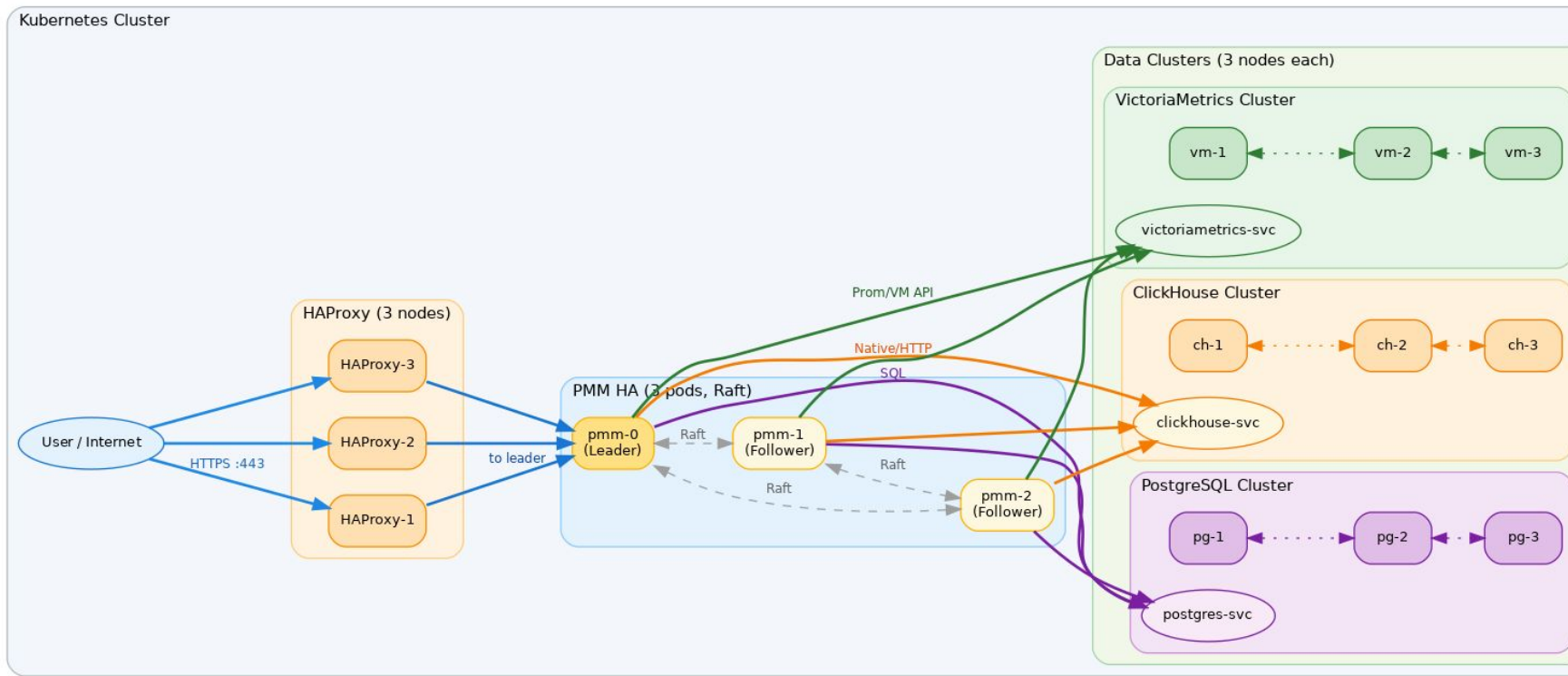
Seamless transition with zero data loss

03

Enterprise Ready

Resilient monitoring at scale

PMM HA Topology



Inventory Design


PERCONA
Monitoring and Management

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Home page


PMM HA At risk

Leader:
pmm-server-0

Health Dashboard

Identify Nodes

Review Alerts

MySQL

MongoDB

PostgreSQL

Operating system

All dashboards

Query Analytics

Explore

Alerts

Percona Intelligence

Inventory

Services

Nodes

PMM Inventory > Nodes

Search or jump to...

%+k

+

Nodes

Services

Nodes

Delete

Filter

Node Name

pmm-server

X

Rows per page: 25

Showing 1-3 of 31 items

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Real-Time Query Analytics

Live View

See running queries across MySQL, PostgreSQL, and MongoDB as they execute

Immediate Troubleshooting

Identify and resolve performance issues in real-time

Immediate AI Insights

Real-time analysis of current database state and query patterns



Query Analytics

⚡ Real-Time
⏸ Freeze

⚙
🔗

Environment =~ megacall
Node =~ mcall

Query text		State	Elapsed time
SELECT * FROM users ORDER BY signup_date;	Pg	Running	1785.23 s
SMEMBERS very_large_set	Vk	Running	1602.89 s
GET product:details:*	Vk	Running	1419.56 s
SELECT * FROM orders WHERE customer_id = 123 ORDER BY order_date;	My	Blocked	1236.22 s
db.analytics.aggregate([{\$group: { _id: null, total: { \$sum: '\$value' } } }])	Me	Running	1052.89 s
HGETALL item:*	Vk	Copying to tmp table	869.56 s
SELECT DISTINCT user_id FROM activity_log;	My	Running	686.22 s
UPDATE products SET views = views + 1;	My	Waiting	502.89 s
UPDATE inventory SET quantity = quantity - 1 WHERE product_name LIKE '%widge_...	My	Sorting result	401.22 s
SELECT * FROM products ORDER BY product_name OFFSET 1000000 LIMIT 10;	Pg	Running	320.56 s
Totals		252.51 load 252.51 QPS	252.51 ms

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AI-Powered Intelligence

Smart Query Analytics

AI-powered tuning suggestions derived from workload patterns and historical data

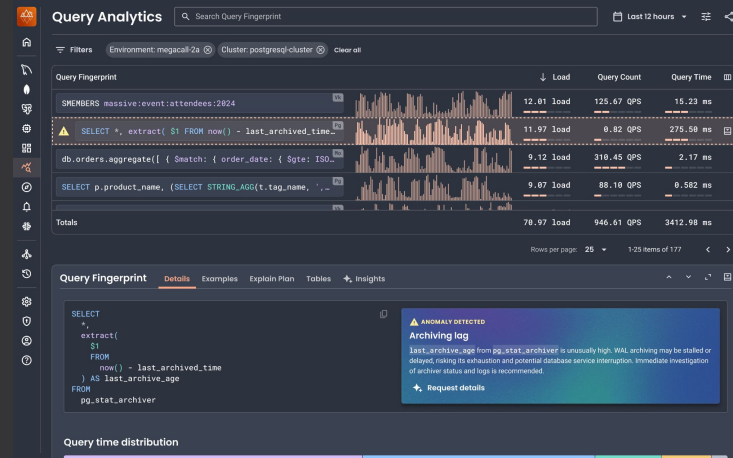
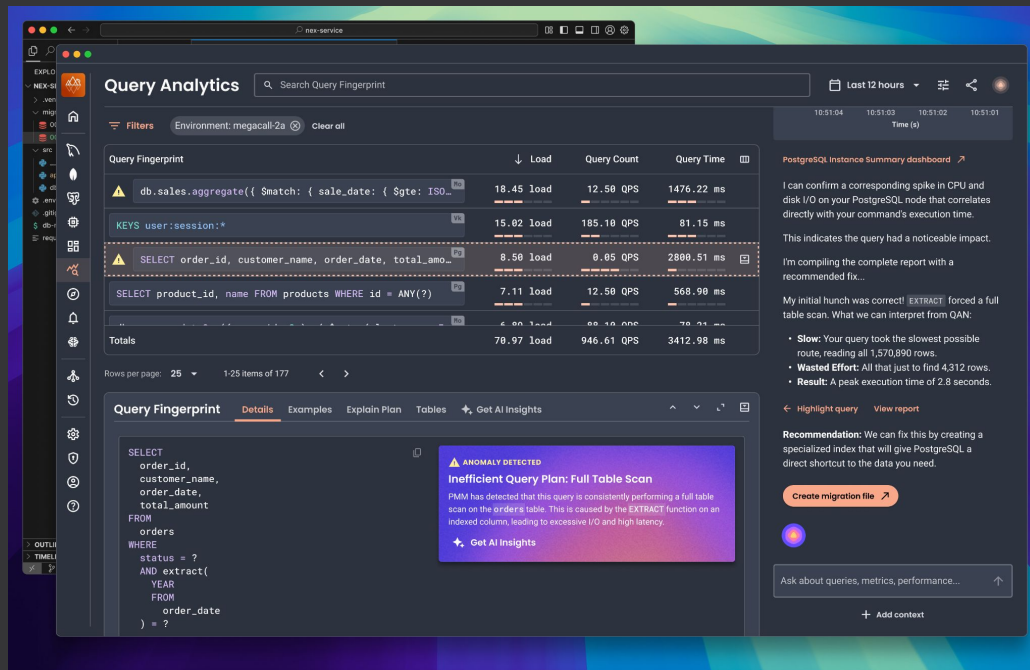
Natural Language Troubleshooting

Ask "Why is my query slow?" and PMM explains the root cause in plain language

Future Vision

Autonomous database optimization through intelligent advisors and automated remediation

Smart Query Analytics



Why Open Source Matters



Transparent Innovation

Community-driven development with full visibility



Bring Your Own AI

Connect your models or use hosted AI services



No Vendor Lock-In

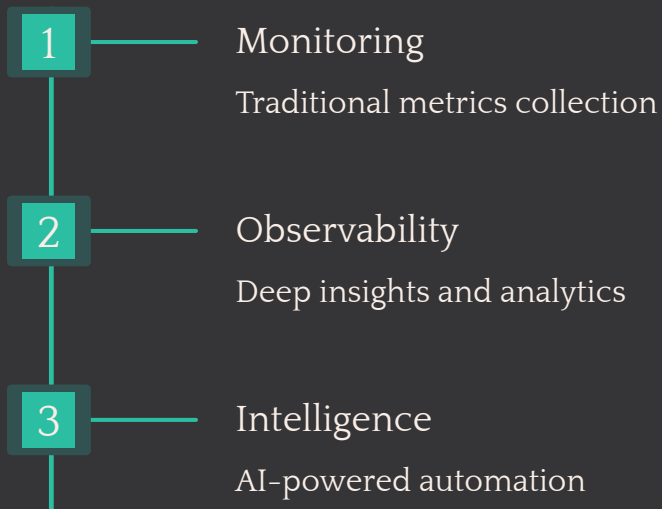
Freedom to customize and extend



Shape the Future

Contribute to AI and observability innovation

PMM's The Evolution Continues



HA, Real-Time Analytics, and AI are making open source observability enterprise-ready. **Join us** - test, contribute, and shape the future of database observability.

Thank You!

Tibor Korocz
tibor.korocz@percona.com