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SIGNOZ VS PMM FOR MYSQL PERFORMANCE MONITORING

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# SigNoz vs Percona Monitoring and Management (PMM) for MySQL Performance Monitoring

Both SigNoz and Percona Monitoring and Management (PMM) are powerful tools, but they focus on different aspects of monitoring. Below is a detailed comparison, including features unique to each tool and those common to both.

## 1. Features Available in PMM but Not in SigNoz

PMM is specifically designed for database performance monitoring, offering features that SigNoz lacks.

| Feature | Description |
| --- | --- |
| Query Analytics (QAN) | Provides deep insights into MySQL queries, execution plans, response times, and slow queries. |
| Performance Schema Integration | Uses MySQL Performance Schema for advanced query insights. |
| MySQL Slow Query Log Analysis | Automatically collects and analyzes slow query logs. |
| Index Usage Analysis | Helps optimize MySQL indexes to improve performance. |
| Replication Monitoring | Monitors MySQL replication status, lag, and failures. |
| Tables & InnoDB Metrics | Tracks table locks, buffer pool usage, and InnoDB-specific performance stats. |
| Query Execution Plan Analysis | Provides execution plans to detect inefficient queries. |
| User Privilege & Security Auditing | Monitors MySQL user privileges and detects unauthorized access. |
| Backup Monitoring | Tracks MySQL backups and their success/failure status. |
| Database-Specific Dashboards | Pre-configured Grafana dashboards for MySQL, PostgreSQL, and MongoDB. |
| MySQL Query Kill Functionality | Allows terminating long-running queries to free up database resources. |
| Custom Query Performance Metrics | Lets users define and track specific MySQL performance metrics. |

PMM is the best choice if your focus is deep MySQL performance tuning and database health monitoring.

## 2. Features Available in SigNoz but Not in PMM

SigNoz is a full observability platform that covers application-level monitoring, logs, and traces, which PMM lacks.

| Feature | Description |
| --- | --- |
| Application Performance Monitoring (APM) | Tracks web/API requests, microservices, and overall app performance. |
| Distributed Tracing | Uses OpenTelemetry to track requests across multiple services (great for microservices). |
| Real User Monitoring (RUM) | Measures actual user interactions with the frontend (page load times, latency). |
| Log Management | Collects, indexes, and analyzes logs (not just metrics). |
| APM for Multiple Languages | Supports Java, .NET, Node.js, Python, and more via OpenTelemetry. |
| Microservices Monitoring | Provides deep visibility into distributed applications. |
| Service Dependency Graph | Maps how different services interact and their response times. |
| Custom Alerts for Application Metrics | Allows setting up alerts based on application performance metrics. |
| Application Error Tracking | Captures and analyzes application errors and stack traces. |
| Frontend Performance Monitoring | Tracks browser-side performance issues. |

SigNoz is better for full-stack application monitoring, tracing, and log management across microservices.

## 3. Features Available in Both SigNoz & PMM

Both tools provide core monitoring capabilities, but they differ in their approach.

| Feature | Description |
| --- | --- |
| System Metrics Monitoring | Tracks CPU, memory, disk usage, and network performance. |
| Custom Dashboards | Provides customizable visualization of metrics. |
| Prometheus-Based Metrics | Uses Prometheus for metric collection. |
| Alerting & Notifications | Supports alerting via Slack, PagerDuty, Email, etc. |
| Role-Based Access Control (RBAC) | Allows managing user access and roles. |
| Docker & Kubernetes Support | Can be deployed via Docker and Kubernetes. |
| Open-Source & Self-Hosted | Both are open-source and can be installed on your own servers. |
| Grafana Integration | Can be used with Grafana for visualization. |
| Cloud & On-Prem Deployment | Can be deployed on cloud platforms or on-premises servers. |

Both SigNoz & PMM provide system monitoring, dashboards, alerts, and open-source flexibility.

## 4. Which One Should You Choose?

**Choose PMM if:**

* You need deep MySQL query performance insights (slow queries, execution plans).
* You want MySQL replication, index, and backup monitoring.
* Your focus is database performance tuning and security auditing.

**Choose SigNoz if:**

* You need full observability (APM, logs, traces, metrics).
* You work with microservices and want distributed tracing.
* You want frontend and backend performance monitoring in one tool.

**Choose Both if:**

* You want PMM for deep MySQL monitoring and SigNoz for full application performance monitoring.