

# SQL Diagnostic Manager for MySQL

## MONITOR MYSQL AND MARIA DATABASE PERFORMANCE

The monitoring of MySQL and MariaDB environments is much more straightforward with quality monitoring applications. The proper monitoring applications can let database administrators know when something may be going wrong. SQL Diagnostic Manager for MySQL is a monitor and advisor tool for MySQL and MariaDB. It provides database administrators and system administrators with the right metrics to manage and optimize applications during development and production. It provides the tools to manage many MySQL and MariaDB servers, to tune the database infrastructure, and to aid in finding and fixing problems with database applications before they develop into more serious issues or costly outages.

### ALERTING

#### 1. Receive proactive alerts

Violations of advisor rules trigger events for all monitors. The events provide expert advice on the reported problem. Prevent alerts for insignificant events with delayed notifications.

#### 2. Monitor deadlocks

Monitor MySQL servers for deadlocks. Send notifications of deadlock alerts. Besides detecting deadlocks, view data on the latest deadlock found.

#### 3. Monitor error logs

Monitor MySQL error logs. Send notifications over simple mail transfer protocol (SMTP) and simple network management protocol (SNMP) for error events that require attention.

### BEST PRACTICES

#### 1. Fix problems proactively

Examine the configuration and security of MySQL servers automatically, find problems and tuning opportunities, and access specific corrective actions with over 600 monitors.

#### 2. Follow best practices

Monitor MySQL servers with confidence with a set of best practices from the advisor rules. Receive notifications with specific instructions on how to proactively address the problems.

#### 3. Automate advisor rules

Automate the advisor rules for unattended, around the clock operations. Minimize human errors, improve overall productivity, and lower the total cost of managing MySQL servers.

### CLOUD

#### 1. Install on cloud virtual machines

Run SQL Diagnostic Manager for MySQL on cloud virtual machines with Microsoft Windows and Linux – such as Amazon Elastic Compute Cloud (EC2) and Microsoft Azure Virtual Machines (VMs).

#### 2. Monitor databases on cloud virtual machines

Monitor instances of MySQL running on cloud virtual machines – such as Amazon EC2 and Microsoft Azure VMs.

#### 3. Monitor managed cloud databases

Monitor Amazon RDS for MySQL/MariaDB/Aurora, Microsoft Azure Database for MySQL, Google Cloud SQL for MySQL, and Oracle MySQL Cloud Service.

### SECURITY

#### 1. Detect security problems

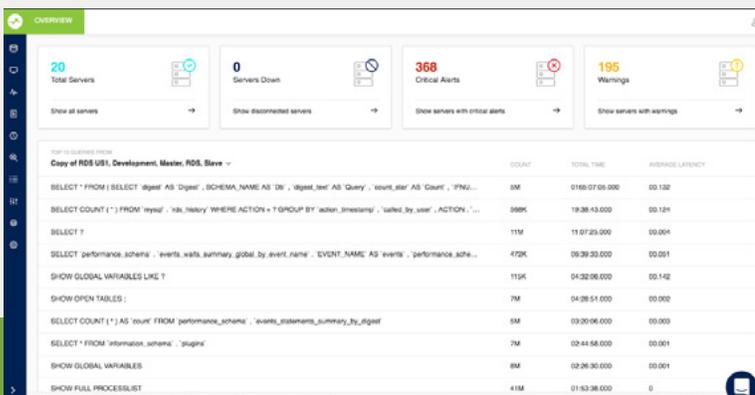
Detect MySQL hacking attempts. Also, determine and fix security vulnerabilities to prevent data breaches.

#### 2. Alert on security issues

Alert on hacking attempts and security risks via dedicated metrics to notify relevant staff right away.

#### 3. Manage multiple-user access

Set up users with limited access to specified servers and settings. Specify the type of user, role, and allowed and disallowed actions, tags, and tabs. Prevent unauthorized activities.



The screenshot displays the 'Overview' page of the SQL Diagnostic Manager for MySQL. At the top, there are four summary cards: '20 Total Servers', '0 Servers Down', '368 Critical Alerts', and '195 Warnings'. Below these cards is a table titled 'TOP 10 QUERIES FROM Copy of RDS US1 - Development, Master, RDS, Slave'. The table has columns for 'COUNT', 'TOTAL TIME', and 'AVERAGE LATENCY'. The queries listed include various SQL statements such as 'SELECT \* FROM (SELECT `digest` AS `digest`, `SCHEMA\_NAME` AS `DB`, `digest\_text` AS `Query`, `server\_host` AS `Host`, `IP\_A...`', 'SELECT COUNT(\*) FROM `mysql`.`tbl\_history` WHERE ACTION = ? GROUP BY `action`, `timestamp`, `called\_by`, `user`, `ACTION`, ...', 'SELECT ?', 'SELECT `performance\_schema`.`events\_waits\_summary\_global\_by\_event\_name`.`EVENT\_NAME AS `events`, `performance\_sche...`', 'SHOW GLOBAL VARIABLES LIKE ?', 'SHOW OPEN TABLES:', 'SELECT COUNT(\*) AS `count` FROM `performance\_schema`.`events\_instances\_summary\_by\_digest`', 'SELECT \* FROM `information\_schema`.`plugins`', 'SHOW GLOBAL VARIABLES', and 'SHOW FULL PROCESSLIST'.

Start for FREE!

With **SQL Diagnostic Manager for MySQL**, we are fast and efficient in tracking down issues leading to greater end-user satisfaction.

Wayne Lansdowne, **IT Architect** at Applied Innovations  
(Small telecommunications business, USA-based with 100 to 499 MySQL databases,

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## PERFORMANCE MONITORING

### 1. Start monitoring fast

Rapidly install and configure all the components needed for monitoring MySQL servers with the unique architecture and low footprint of SQL Diagnostic Manager for MySQL.

### 2. Deploy agentless monitoring

Avoid installing monitoring agents on each MySQL server. Instead, use a standard MySQL connection for monitoring. Collect all monitoring data by using remote connections.

### 3. Monitor in real-time

Know what is happening to MySQL servers without delay. Get vital data with a single click of a mouse button. There is no need to enable slow query logs and general query logs.

## CUSTOMIZATION

### 1. Customize advisor rules

Customize the acceptable thresholds for each MySQL server for each of the included advisor rules. Add new monitors, change existing monitors, and disable pre-defined monitors.

### 2. Create custom SQL objects

Monitor MySQL servers by creating custom SQL objects instead of by writing SQL queries. Track and reference the custom SQL objects via an array of MySQL rows.

### 3. Customize dashboards and charts

Customize the dashboard and charts as per specific MySQL monitoring requirements. Expand a particular chart to identify spikes and the responsible queries.

## ENTERPRISE MANAGEMENT

### 1. Scale up to large environments

Monitor over 500 MySQL servers (even at collection intervals of 1 second) effortlessly with a single installation of SQL Diagnostic Manager for MySQL, according to internal benchmark reports.

### 2. Monitor hybrid environments

Avoid learning new tools by using the same performance monitoring tool for on-premises databases, databases on cloud virtual machines, and managed cloud databases.

### 3. Compare servers

View real-time charts of all critical metrics in the enterprise dashboard. See a merged view of how many MySQL servers are performing with a single instance of SQL Diagnostic Manager for MySQL.

## QUERY PERFORMANCE

### 1. Profile SQL query load

View the load profile of low performing queries on a modern interface that makes it easier to analyze query performance over time.

### 2. Track and analyze SQL queries

Continuously monitor SQL queries in real-time. Send notifications for long-running SQL queries. Specify an option to kill such queries automatically.

### 3. Quickly find problematic queries

Find the top 10 problematic queries across servers based on the total execution time. Visualize critical and warning alerts across servers to find the cause of performance issues.

## DIAGNOSTICS

### 1. View and understand trends

Analyze historical data to see sudden changes in performance parameters and problems immediately. Visually analyze a metric across MySQL servers at various points in time.

### 2. Analyze threads

Display the number of threads that MySQL is executing. View the process list with information on running SQL queries as per execution time.

### 3. Analyze space usage

Display the size of data indexes of the databases with the disk space usage analyzer. Display a graphical chart to locate the largest databases quickly. Drill down to the table level.

## ENVIRONMENT OVERVIEW

### 1. Display dashboard overview

Instantly understand the complete security, availability, and performance of all MySQL servers in a single place, all from a modern and intuitive web interface.

### 2. Monitor server configuration

Compare the configurations of MySQL servers side-by-side with highlighted changes. Track changes to the configuration files of MySQL servers to manage the settings and their impact.

### 3. View replication topology

View the replication hierarchy of servers along with details of each replicated server. Switch from graphical to tabular replication view to get a deep dive into the running servers.