# From MEM to Next-Gen MySQL Monitoring

A practical roadmap for observability & automation in hybrid environments

severalnines

# Housekeeping items

- Standard presentation format
  - Speaker intro
  - Topic
  - Demo
  - Q&A
  - 2 Polls
- Recording will be sent to attendees

# Your expert presenter

Who: Ashraf Sharif
What: Support Engineering Team Lead
Where: Severalnines
Why: 15+ YoE as DBA for MySQL, MariaDB, Galera, MongoDB, Redis

```
<img src="image.jpg" alt="Image"
width="300" height="300">
```

# AGENDA

- MySQL Enterprise Monitor (MEM)
- Enterprise Manager for MySQL (EM4MySQL)
- ClusterControl (CC)
- Migration Paths
- Decision framework, costs, and next steps

# MySQL Enterprise Monitor (MEM) Overview

# MySQL Server Community vs Enterprise

| Area | Community | Enterprise |
|---|---|---|
| **License & support** | GPLv2, community support only | Commercial + Oracle Premier Support |
| **Backup** | mysqldump, mysqlpump, snapshot | + MySQL Enterprise Backup |
| **Security & compliance** | SSL/TLS, user/roles, password policies | + Enterprise Audit, Enterprise Firewall, Enterprise Encryption, Transparent Data Encryption, Data Masking & De-identification |
| **Authentication** | Native MySQL auth, community plugins | + Enterprise Authentication plugins: PAM/LDAP/AD/Kerberos/Windows external auth. |
| **Scalability** | One-thread-per-connection | + Enterprise Thread Pool plugin |
| **Monitoring & management** | Open-source stacks (Prometheus/Zabbix/PMM,etc) | - MySQL Enterprise Monitor (EOL Jan 1, 2025)<br>+ Oracle Enterprise Manager or OCI Database Management |

# MySQL Server Enterprise

MySQL Community Server

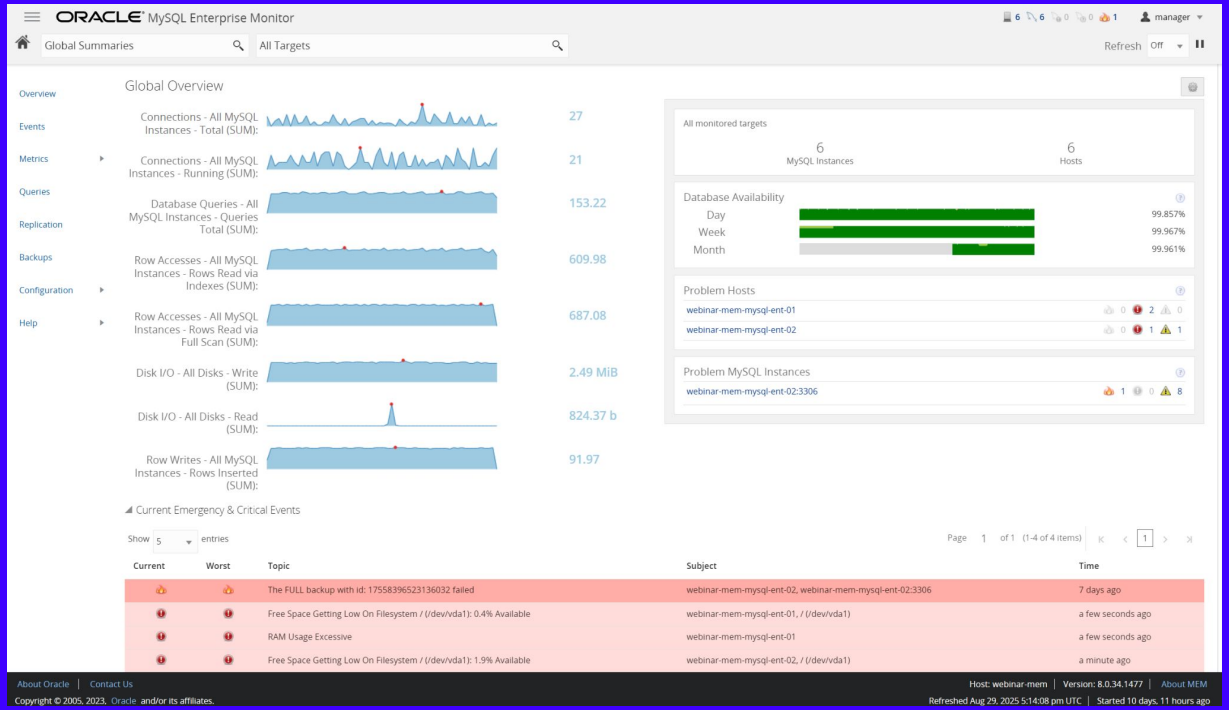
MySQL Enterprise Server + MEB + MEM

```
mysql> show plugins;
+-------------------------------------------+----------+--------------------+----------------------+---------------+
| Name                                      | Status   | Type               | Library              | License       |
+-------------------------------------------+----------+--------------------+----------------------+---------------+
| binlog                                    | ACTIVE   | STORAGE ENGINE     | NULL                 | PROPRIETARY   |
| sha256_password                           | ACTIVE   | AUTHENTICATION     | NULL                 | PROPRIETARY   |
| caching_sha2_password                     | ACTIVE   | AUTHENTICATION     | NULL                 | PROPRIETARY   |
| sha2_cache_cleaner                        | ACTIVE   | AUDIT              | NULL                 | PROPRIETARY   |
| daemon_keyring_proxy_plugin               | ACTIVE   | DAEMON             | NULL                 | PROPRIETARY   |
| CSV                                       | ACTIVE   | STORAGE ENGINE     | NULL                 | PROPRIETARY   |
| MEMORY                                    | ACTIVE   | STORAGE ENGINE     | NULL                 | PROPRIETARY   |
| InnoDB                                    | ACTIVE   | STORAGE ENGINE     | NULL                 | PROPRIETARY   |
| INNODB_TRX                                | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_CMP                                | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_CMP_RESET                          | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_CMPMEM                             | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_CMPMEM_RESET                       | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_CMP_PER_INDEX                      | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_CMP_PER_INDEX_RESET                | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_BUFFER_PAGE                        | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_BUFFER_PAGE_LRU                    | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_BUFFER_POOL_STATS                  | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_TEMP_TABLE_INFO                    | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_METRICS                            | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_FT_DEFAULT_STOPWORD                | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_FT_DELETED                         | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_FT_BEING_DELETED                   | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_FT_CONFIG                          | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_FT_INDEX_CACHE                     | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_FT_INDEX_TABLE                     | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_TABLES                             | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_TABLESTATS                         | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_INDEXES                            | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_TABLESPACES                        | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_COLUMNS                            | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_VIRTUAL                            | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_CACHED_INDEXES                     | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| INNODB_SESSION_TEMP_TABLESPACES           | ACTIVE   | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| MyISAM                                    | ACTIVE   | STORAGE ENGINE     | NULL                 | PROPRIETARY   |
| MRG_MYISAM                                | ACTIVE   | STORAGE ENGINE     | NULL                 | PROPRIETARY   |
| PERFORMANCE_SCHEMA                        | ACTIVE   | STORAGE ENGINE     | NULL                 | PROPRIETARY   |
| TempTable                                 | ACTIVE   | STORAGE ENGINE     | NULL                 | PROPRIETARY   |
| ARCHIVE                                   | ACTIVE   | STORAGE ENGINE     | NULL                 | PROPRIETARY   |
| BLACKHOLE                                 | ACTIVE   | STORAGE ENGINE     | NULL                 | PROPRIETARY   |
| FEDERATED                                 | DISABLED | STORAGE ENGINE     | NULL                 | PROPRIETARY   |
| ndbcluster                                | DISABLED | STORAGE ENGINE     | NULL                 | PROPRIETARY   |
| ndbinfo                                   | DISABLED | STORAGE ENGINE     | NULL                 | PROPRIETARY   |
| ndb_transid_mysql_connection_map          | DISABLED | INFORMATION SCHEMA | NULL                 | PROPRIETARY   |
| ngram                                     | ACTIVE   | FTPARSER           | NULL                 | PROPRIETARY   |
| mysqlx_cache_cleaner                      | ACTIVE   | AUDIT              | NULL                 | PROPRIETARY   |
| mysqlx                                    | ACTIVE   | DAEMON             | NULL                 | PROPRIETARY   |
| mysql_native_password                     | DISABLED | AUTHENTICATION     | NULL                 | PROPRIETARY   |
| CONNECTION_CONTROL                        | ACTIVE   | AUDIT              | connection_control.so| PROPRIETARY   |
| CONNECTION_CONTROL_FAILED_LOGIN_ATTEMPTS  | ACTIVE   | INFORMATION SCHEMA | connection_control.so| PROPRIETARY   |
| thread_pool                               | ACTIVE   | DAEMON             | thread_pool.so       | PROPRIETARY   |
| TP_THREAD_STATE                           | ACTIVE   | INFORMATION SCHEMA | thread_pool.so       | PROPRIETARY   |
| TP_THREAD_GROUP_STATE                     | ACTIVE   | INFORMATION SCHEMA | thread_pool.so       | PROPRIETARY   |
| TP_THREAD_GROUP_STATS                     | ACTIVE   | INFORMATION SCHEMA | thread_pool.so       | PROPRIETARY   |
| audit_log                                 | ACTIVE   | AUDIT              | audit_log.so         | PROPRIETARY   |
| MYSQL_FIREWALL                            | ACTIVE   | AUDIT              | firewall.so          | PROPRIETARY   |
| MYSQL_FIREWALL_USERS                      | ACTIVE   | INFORMATION SCHEMA | firewall.so          | PROPRIETARY   |
| MYSQL_FIREWALL_WHITELIST                  | ACTIVE   | INFORMATION SCHEMA | firewall.so          | PROPRIETARY   |
| Rewriter                                  | ACTIVE   | AUDIT              | rewriter.so          | PROPRIETARY   |
| data_masking                              | ACTIVE   | UDF                | data_masking.so      | PROPRIETARY   |
| authentication_ldap_simple                | ACTIVE   | AUTHENTICATION     | authentication_ldap_simple.so | PROPRIETARY |
| authentication_pam                        | ACTIVE   | AUTHENTICATION     | authentication_pam.so| PROPRIETARY   |
+-------------------------------------------+----------+--------------------+----------------------+---------------+
62 rows in set (0.00 sec)

mysql> select * from mysql.component;
+--------------+--------------------+-----------------------------------+
| component_id | component_group_id | component_urn                     |
+--------------+--------------------+-----------------------------------+
|            1 |                  1 | file://component_telemetry        |
|            2 |                  2 | file://component_validate_password |
+--------------+--------------------+-----------------------------------+
2 rows in set (0.00 sec)
```

# MySQL Enterprise Monitor

- On-premises monitoring solution for MySQL servers
- Available as part of the MySQL Enterprise subscription
- First release - v1 - 2006
- EOL - v8 - Jan 1st, 2025 (18+ years)
- Major features:
  - Monitoring
  - Alerting
  - Compliance

ORACLE® MySQL Enterprise Monitor



# Why MEM is EOLed?

- To consolidate MySQL monitoring into Oracle's newer platforms:
  - Oracle Enterprise Manager for MySQL (plug-in), or
  - The cloud-hosted OCI Database Management for MySQL.
- Limited integrations with modern tools
- Resource focus on newer platforms and analytics

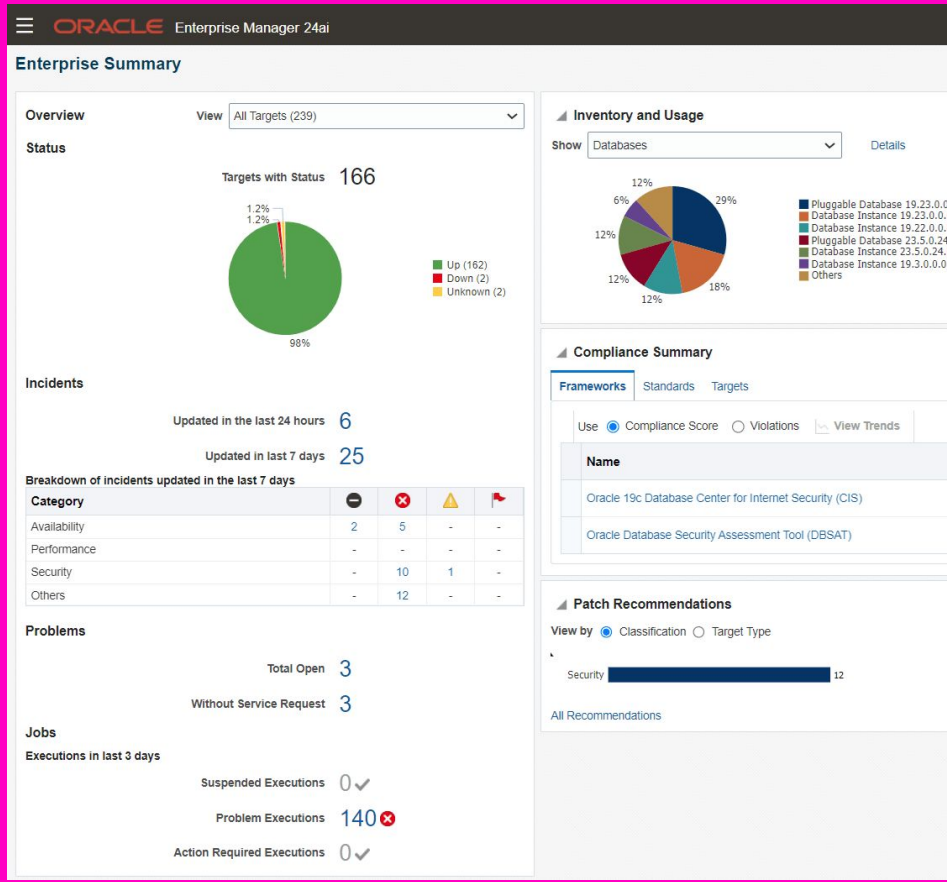
# Impact on Your Operations

- **Monitoring & Alerting**
  - Assess coverage gaps as updates cease
  - Validate alert rules and channels
- **Security & Compliance**
  - No new fixes → plan risk mitigation
  - Map responsibilities for patching stack
- **Supportability**
  - Vendor support transitions
  - Community vs. enterprise support trade-offs

# Oracle Enterprise Manager for MySQL (EM4MySQL) Overview

# Oracle Enterprise Manager (EM)

- Latest release: 24ai (2025)
- On-premises management platform for monitoring, configuring, patching, and automating Oracle infrastructure
- Scalable architecture (agents + plugins + centralized services)
- Higher infrastructure footprint than MEM
- No separate license need for base functionality (EM is paired with a properly licensed Oracle product)



# EM Plugins

## Applications

- Oracle E-Business Suite
- Oracle Instant Messaging Server
- Oracle Jdedwards EntepriseOne
- Oracle PeopleSoft
- Oracle Primavera P6 EPPM
- Oracle Primavera Prima
- Oracle Siebel
- Oracle Utilities Application
- Oracle Utilities Network Management System
- Oracle VCP

## Cloud

- Oracle Cloud Application
- Oracle Cloud Framework

## Databases

- IBM DB2
- Microsoft SQL Server
- MySQL
- Oracle Database
- Oracle TimesTen In-Memory
- Sybase ASE

## Server, Storage, Network

- Oracle Axiom
- Oracle Flash Storage System
- Oracle Key Manager
- Oracle Secure Global Desktop
- Oracle ZFS Storage Appliances
- Oracle Storage Management Framework
- Oracle Virtual Infrastructure
- Sun Ray Software
- System Infrastructure

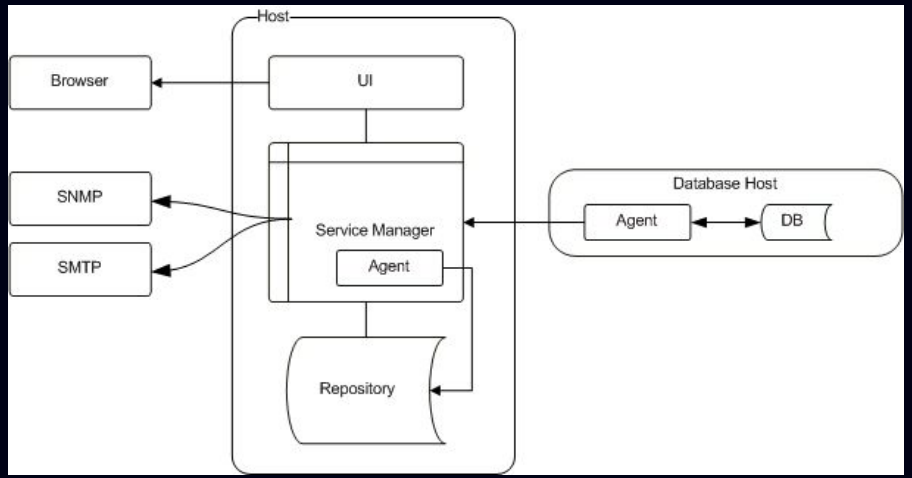
## Middleware

- Apache Tomcat
- IBM WebSphere
- JBoss Enterprise Application Platform
- Microsoft IIS
- Oracle Fusion Middleware
- Oracle GoldenGate
- Oracle Tuxedo
- Oracle Unified Directory

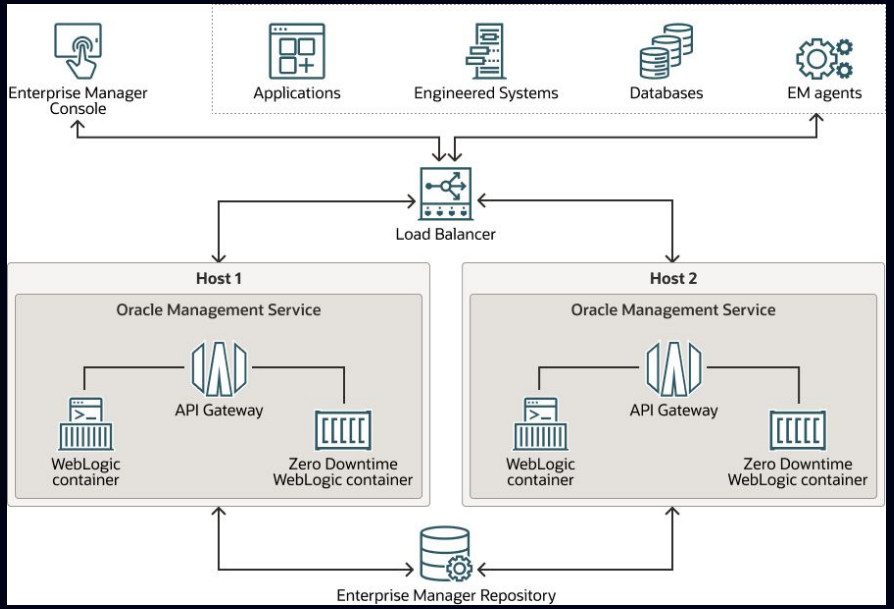
## Engineered System

- Oracle Exadata
- Oracle Database Appliance
- Zero Data Loss Recovery Appliance

# Architecture




MEM v8




EM v24ai

# EM Requirements

**For the latest 24ai:**

- Management repository:
  - Oracle Database 19c with RU ≥ 19.22
- Hardware (production- small<1000 targets):
  - CPU cores: 4 cores
  - RAM: 16+ GB RAM
  - Disk: 100+ GB
- Operating system:
  - OL7/RHEL7+
  - SUSE Enterprise Linux 12+
  - Solaris SPARC
  - IBM AIX 7.2
  - Microsoft Windows
- An active My Oracle Support (MOS) account
- Network and ports:
  - Agent host: 3872/TCP
  - OMS console (UI): defaults picked from ranges during install - HTTP 7788-7798, HTTPS 7799-7809.
  - Upload (agent→OMS): HTTPS 1159 or 4899–4908
- Privilege delegation:
  - sudo - grant NOPASSWD
- Packages (OS dependant):
  - make/binutils/gcc/libstdc++/libaio/sysstat/libXtst

# Oracle Jargons

- EM - Oracle Enterprise Manager
- OMS - Oracle Management Server
- OMA - Oracle Management Agent
- RU - Release Update
- OL - Oracle Linux
- MOS - My Oracle Support
- OCI - Oracle Cloud Infrastructure
- Targets - Instance to be monitored by an OMA
- Remote Targets - Remote instances to be monitored by an OMA
- Oracle Management Repository - Oracle database server that hosts EM's data.

# Installing Oracle Enterprise Manager for MySQL (standalone)

**1. Download Oracle Enterprise Manager 24ai from eDelivery**
- Installer size ~16GB
- Download ~ 1 hour

**2. Install Oracle Database Server 19c**
- Host preparation ~ 1 hour
- Installation ~ 1 hour

**3. Download latest OPatch and Oracle Database server patch RU 22 or later**
- Installer size ~ 4 GB
- Download ~ 30 minutes

**4. Install latest OPatch and patch the Oracle Database server**
- Preparation ~ 1 hour
- Patching ~ 1 hour

**5. Create EM database**
- Preparation and creation ~ 1 hour

**6. Install EM 24ai**
- Preparation ~ 1 hour
- Installation ~ 3 hours

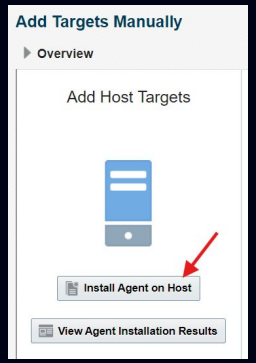
**7. Configure My Oracle Support credentials**

~ 1 minute

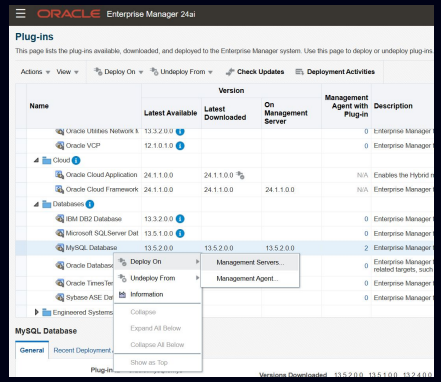
**8. Download EM Database Plugin for MySQL**
- Download ~ 10 minutes

# Adding MySQL Instances

Install the agent (OMA) on the database hosts.



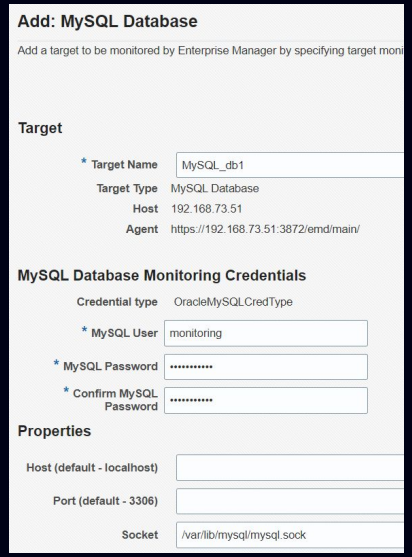

Deploy MySQL plugin to OMS and OMA(s)




Create monitoring user

```
# On the DB server

mysql> CREATE USER
'monitoring'@'localhost'
IDENTIFIED BY
'Super^Str0ngPass769';

mysql> GRANT SELECT,
REPLICATION CLIENT, SHOW
DATABASES, PROCESS,
EXECUTE
ON *.* TO
'monitoring'@'localhost';
```

Add the database instance into EM



# Features Gap

**MySQL Enterprise Monitor (MEM)**

- Topology viewer
- In-depth query analyzer
- Automatic grouping for replication, InnoDB Cluster and NDB Cluster
- MySQL Enterprise Backup (MEB) monitoring

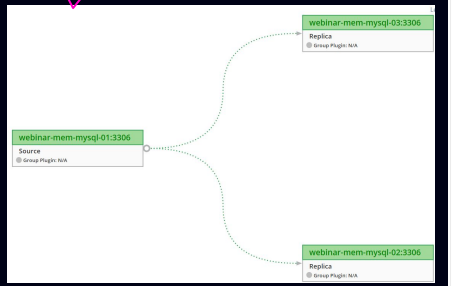
**Oracle Enterprise Manager (EM) for MySQL**

- Monitor other systems and databases
- Runbooks
- Compliance management
- Configuration drift
- Notification integration (mobile apps, webhooks, Slack)
- Incident management
- EMCLI

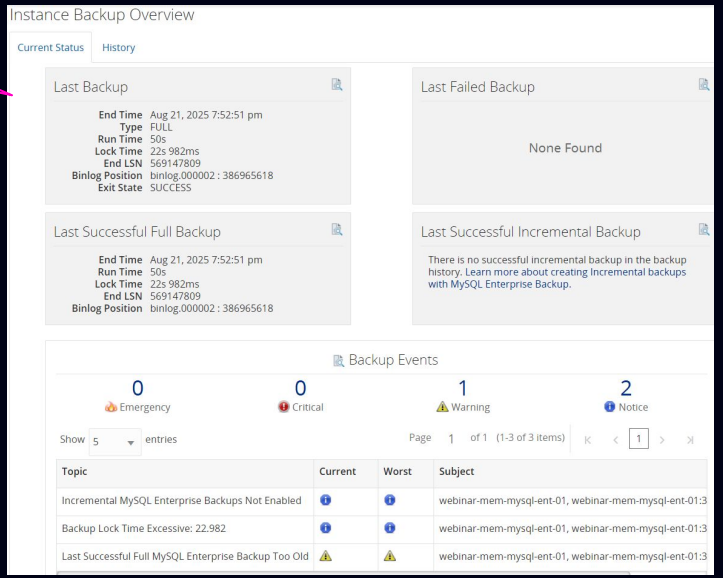
# Features Gap - What you will miss

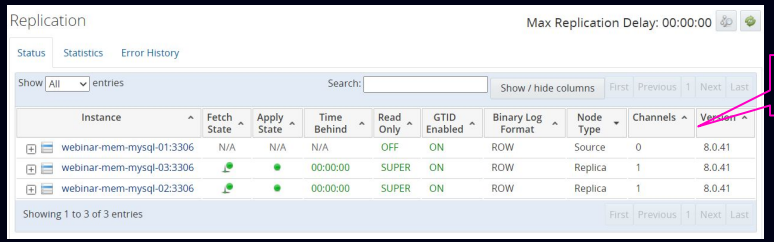

Backup monitoring

Topology viewer



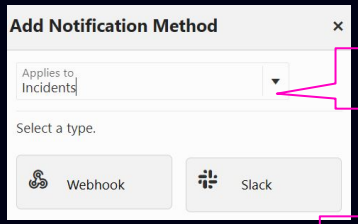

In-depth query monitoring



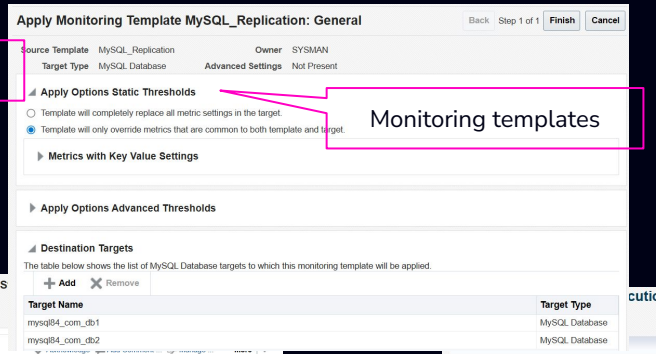




Instances auto grouping

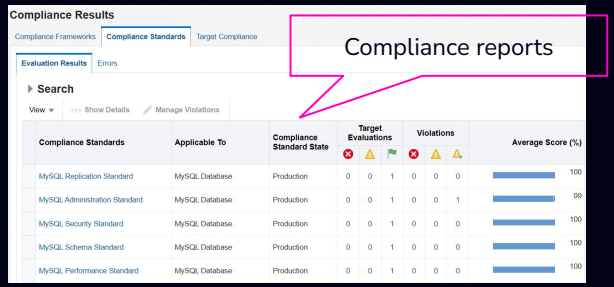
# Features Gap - What you will get




Notification integration

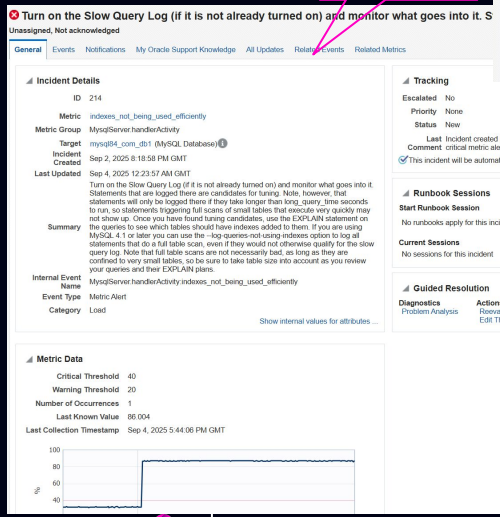



Monitoring templates

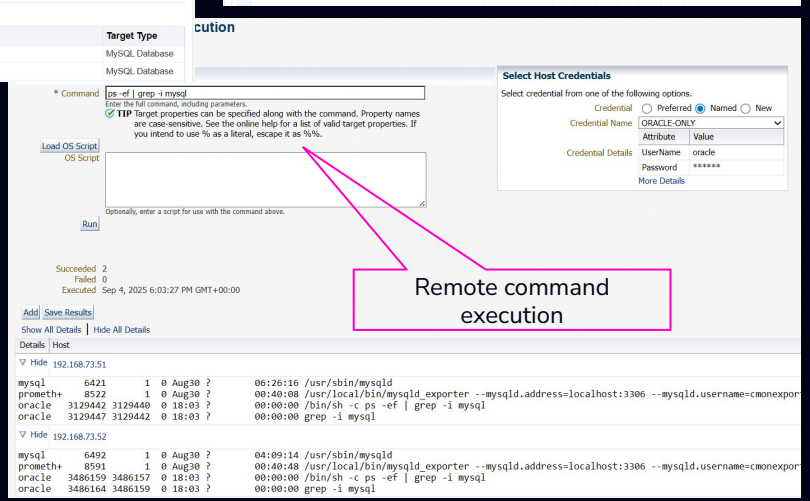



Compliance reports

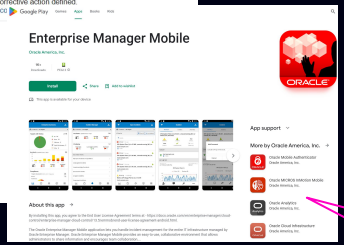
Incident manager




Runbook




Remote command execution




Mobile apps

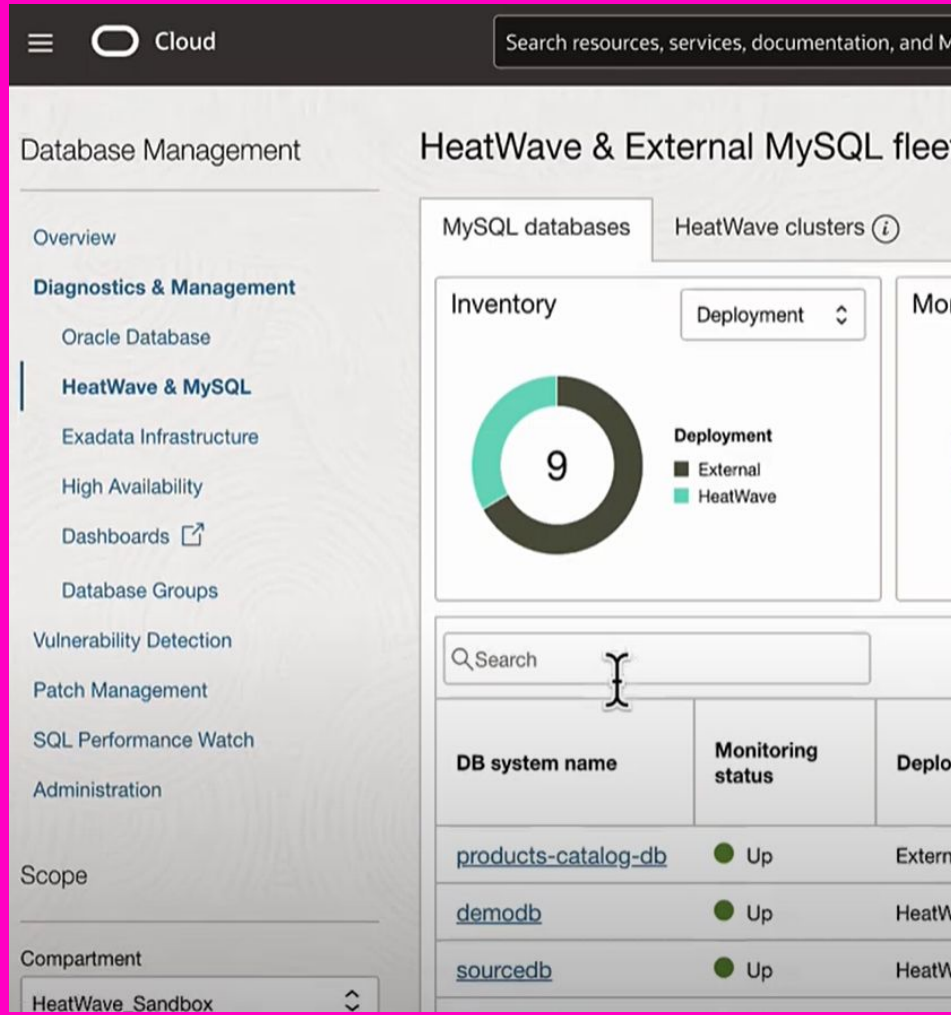
# Some Tips..

- Don't underestimate the EM requirements and installation procedures. It can take days to weeks.
- MySQL 5.7+ supported. For MySQL 8.0 support requires plug-in 13.2.4.0.0+
- The current plug-in does not support TLS for the monitored connection, so the monitoring user must not be defined with REQUIRE SSL.
- Enable sys schema and performance_schema instrumentations:

```
# On every DB server
CALL sys.ps_setup_enable_instrument('wait');
CALL sys.ps_setup_enable_instrument('stage');
CALL sys.ps_setup_enable_instrument('statement');
CALL sys.ps_setup_enable_consumer('current');
CALL sys.ps_setup_enable_consumer('history_long');
```

# Oracle Cloud Infrastructure (OCI) Database Management

- A managed, cloud-hosted monitor with lighter local footprint
- Subscription-based model - *Database Management for MySQL External Nonmetered* - ~USD$15/month/host CPU core
- Notable MySQL features on OCI:
  - MySQL Database Service (MDS)
  - HeatWave MySQL
- Quicker piloting and onboarding

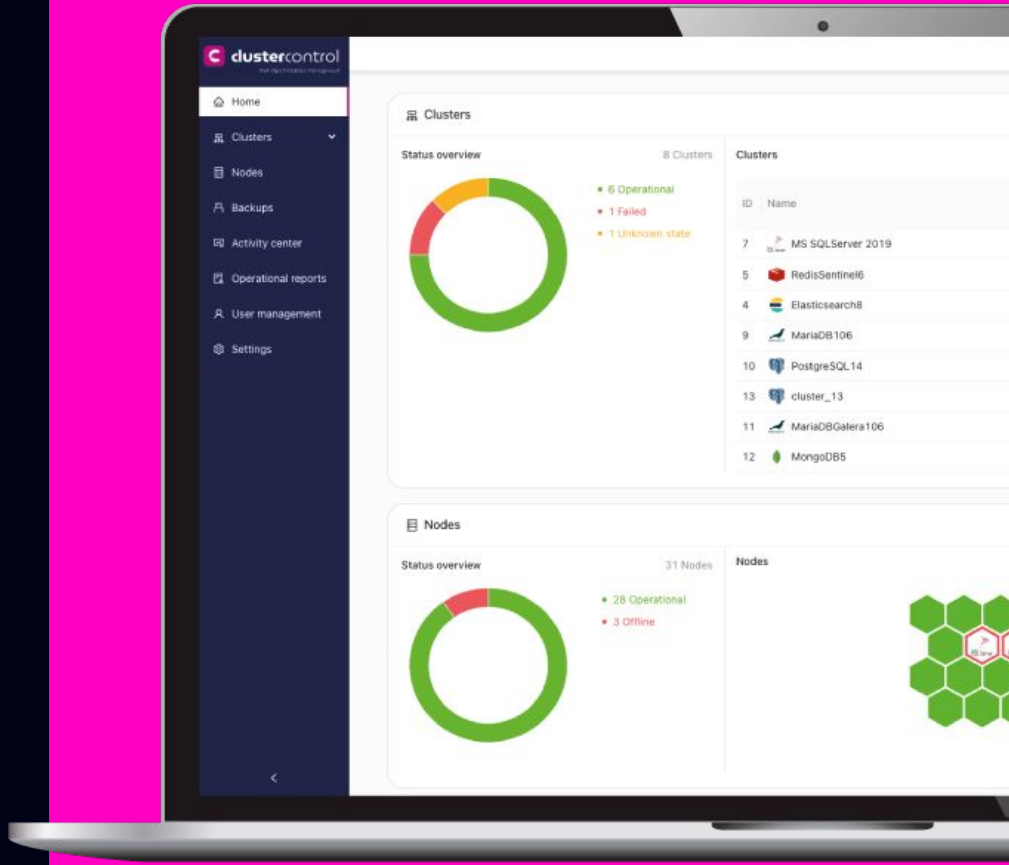


# ClusterControl Overview

# Introducing ClusterControl

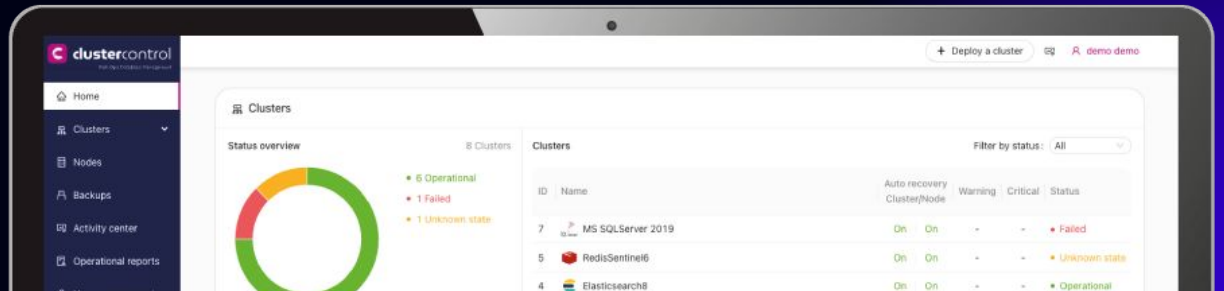
Database ops orchestration platform to deploy, monitor, manage, and scale database ops in any environment:

- Self-hosted in on-prem and hybrid environments
- Centralized management and monitoring from a single pane of glass
- Supports open-source and source-available databases
- Integrates with popular tooling - Terraform, Ansible, Puppet, etc

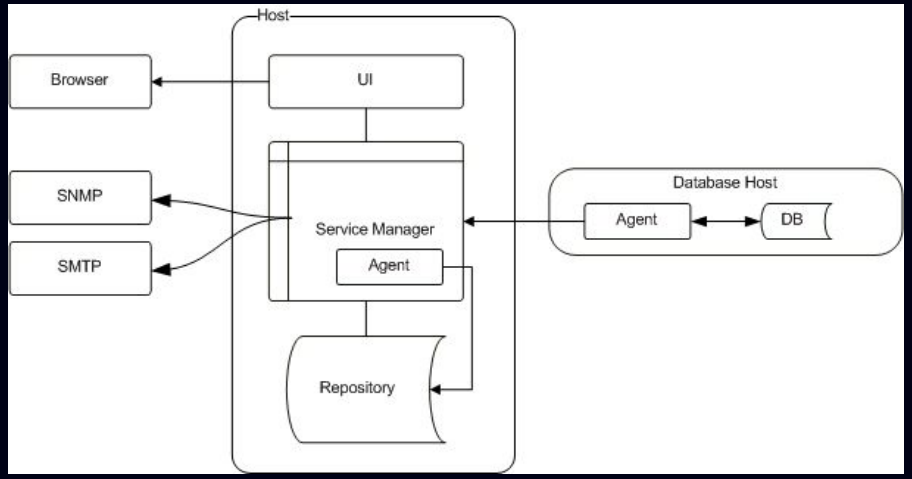


# ClusterControl is holistic

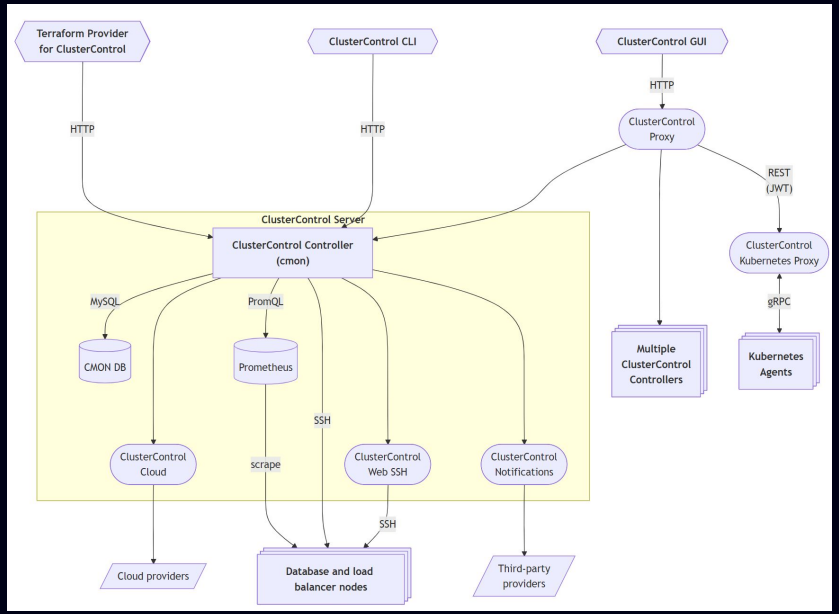
| | | | |
|---|---|---|---|
| Deploy | Scale | Failover | Backup and restore |
| Monitor | Integrate | Management | Administration |



# Architecture




**MEM v8**




**ClusterControl v2.3.3**

# Supported Database Technology

### MySQL/MariaDB

- Standalone & replication:
  - MySQL Community Server
  - Percona Server for MySQL
  - Percona Server for MySQL Pro
  - MariaDB Community Server
- Galera Cluster:
  - Percona XtraDB Cluster
  - Percona XtraDB Cluster Pro
  - MariaDB Cluster
- *Group Replication (coming soon!)*

### PostgreSQL

- Standalone & streaming replication:
  - PostgreSQL
  - EDB
  - TimescaleDB
- Logical replication:
  - PostgreSQL

### MongoDB

- Standalone, replica set and sharded cluster:
  - MongoDB Community
  - MongoDB Enterprise
  - Percona Server for MongoDB

### Elasticsearch

- Single-node cluster
- Multi-node cluster

### Redis

- Standalone, replication with Sentinel & cluster:
  - Redis Community Server
  - Valkey

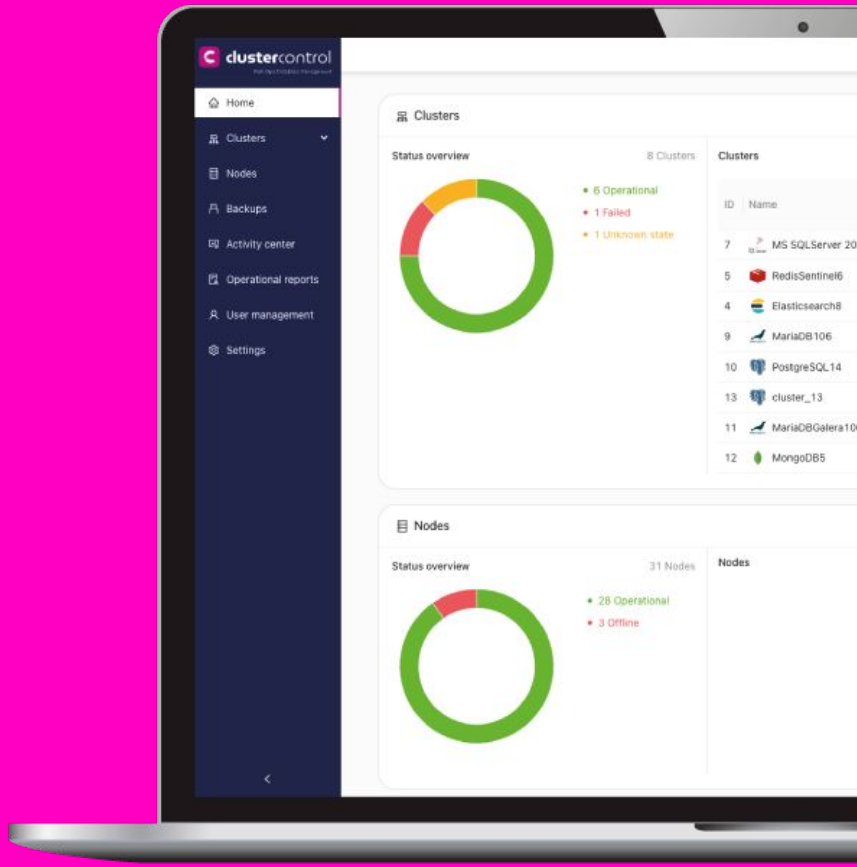
### Microsoft SQL Server

- Standalone
- Always On availability group

# Overview

- First release: 2011 (14+ years) - started with MySQL Cluster (NDB)
- Edition:
  - Community (free forever - monitoring & deployment)
  - Advanced (+management,+scaling)
  - Enterprise (+security,+24/7/365)
- Latest version: 2.3.3 (Jul 2025)
- Free 30-day Enterprise trial license (turns to Community after expiry)
- Linux x86_64 only
- Installation:

```
# On ClusterControl server, as root
$ wget https://severalnines.com/downloads/cmon/install-cc
$ bash install-cc
```

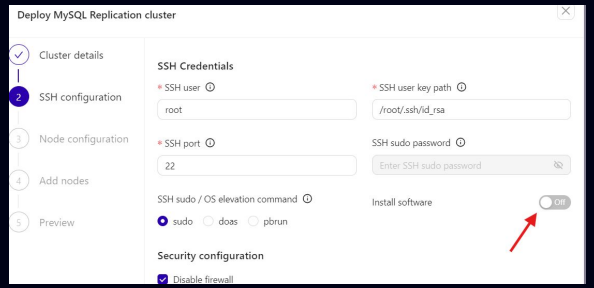


# Support for MySQL Enterprise

1. ClusterControl does not officially support full lifecycle management of MySQL Enterprise Server, however it supports :
    - MySQL replication (single-primary, multi-primary, chain-replication)
    - MySQL standalone
    - MySQL Group Replication (InnoDB cluster, but without Router + Shell) *- coming soon in the next release*
2. Supported operating systems:
    - RHEL/AlmaLinux/Oracle Linux/Rocky Linux 8/9
    - Debian 11/12
    - Ubuntu 22.04/24.04
3. ClusterControl understands MySQL topology & ecosystem - MySQL/MariaDB/Percona/Galera/NDB Cluster/Xtrabackup/ProxySQL
4. Install the MySQL Enterprise packages manually and toggle OFF "Install software".

**Fun fact!**

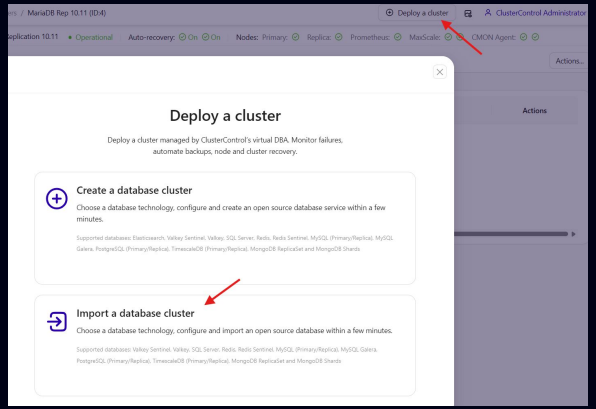
ClusterControl also supports proprietary databases; Percona Pro, MongoDB Enterprise, EDB and Microsoft SQL Server for Linux.

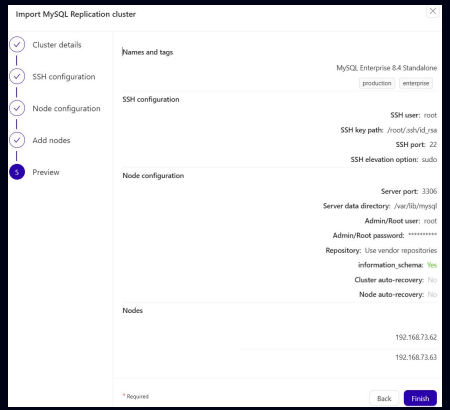


# Importing MySQL Enterprise Servers

1. Configure SSH key-based authentication from ClusterControl server to all database nodes.
2. Go to *ClusterControl GUI -> Deploy a Cluster -> Import a database cluster*.
3. Fill up all required information.
4. Click *Finish* and monitor the job progress.

```
# On ClusterControl server
$ ssh-copy-id root@192.168.73.62
$ ssh-copy-id root@192.168.73.63
```



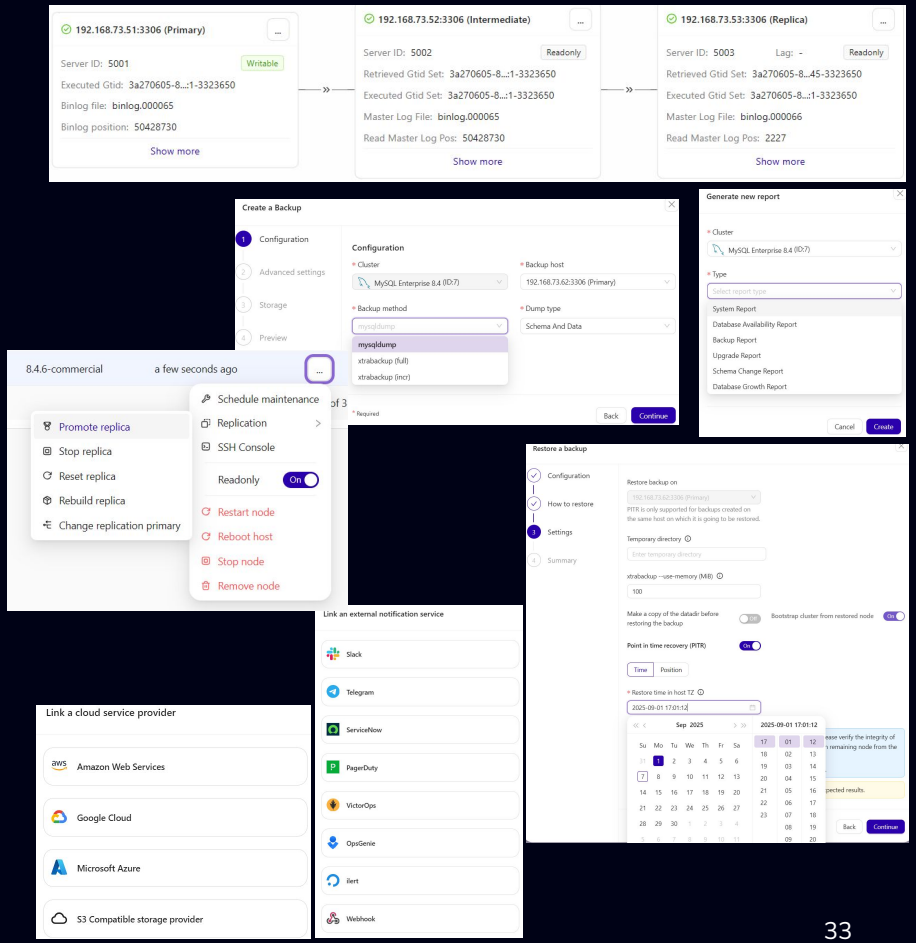
# Adapting MySQL Enterprise into CC

1. Install Percona Xtrabackup for physical backup.
2. Configure a dummy backup user secret file.
3. Host must be configured with `report_host=<ip_address>` inside my.cnf for an accurate Topology visualization.
4. ClusterControl will manage the read_only flag. If you want to manage yourself, set `auto_manage_readonly=0` inside cmon_X.cnf (where X is the cluster ID).
5. Install MySQL Enterprise packages manually and set *install_software = false* when scaling up the database node via ClusterControl.

```
# Install Xtrabackup
$ dnf install percona-release
$ dnf install percona-xtrabackup-84
$ apt install percona-release
$ apt install percona-xtrabackup-84

# Create a dummy backup credential file
$ cat > /etc/mysql/mysql.conf.d/secrets-backup.cnf <<EOF
[mysqldump]
user=backupuser
password=whateverpasswordsitsjustadummy

[xtrabackup]
user=backupuser
password=whateverpasswordsitsjustadummy
EOF

# Secure it
$ chmod 640 /etc/mysql/mysql.conf.d/secrets-backup.cnf

# Go to ClusterControl and create a new database backup.
ClusterControl will reconfigure the backupuser accordingly.
```

# What you will get

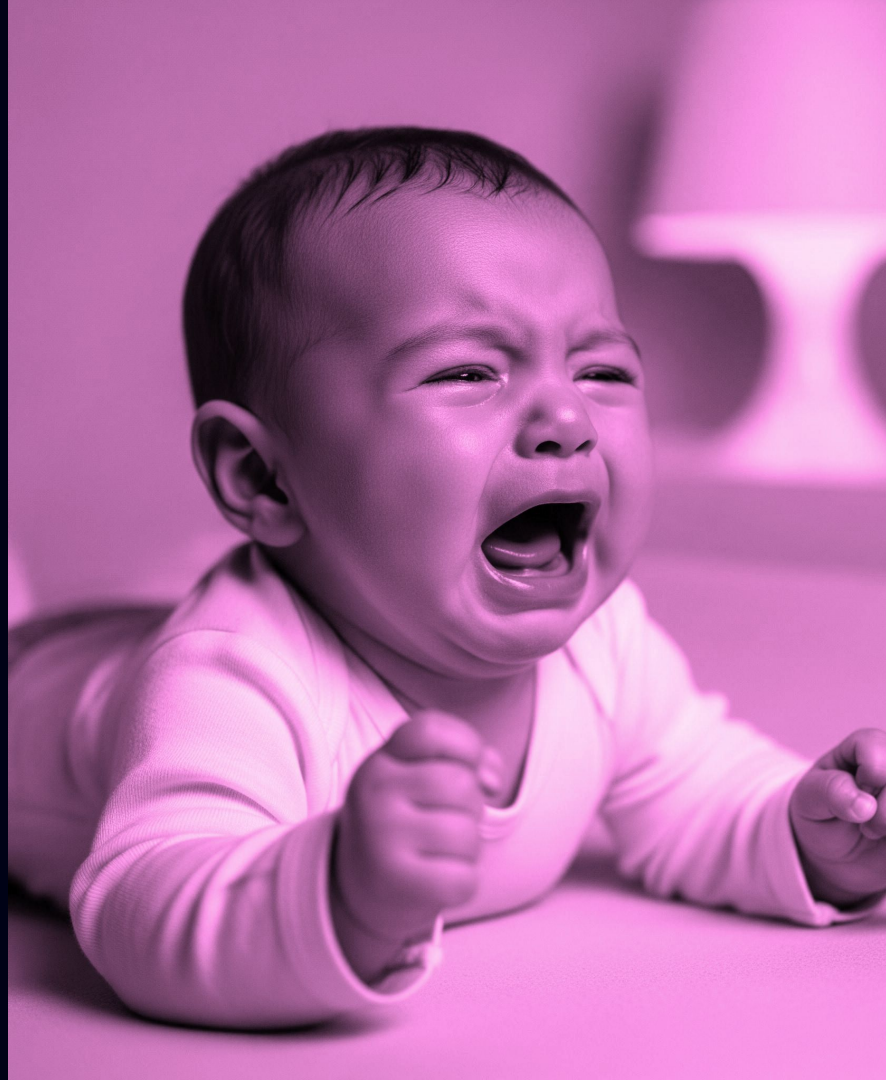
- Monitoring (Host/DB/DB status/DB variables/logs/topology and query)
- Management - Backup (mysqldump/PXB), restore, backup verification, backup to cloud, PITR, configuration, DB users, SSL/TLS, restart, reboot, maintenance mode.
- Cluster recovery - Primary/replica failover, switchover, replica promotion, read-only
- Scaling - Add/remove new replica, create cluster from backup
- Load balancer integration (HAProxy/ProxySQL/Keepalived)
- Reporting - Operational reports, availability report, backup report, DB growth, schema analyzer, schema change report
- Alert & notifications - Email, Slack, Telegram, Webhook, PagerDuty, ServiceNow, OpsGenie, VictorOps, ilert



# What you will not get

1. MySQL Enterprise plugins management (so does MEM/EM)
2. MySQL Enterprise Backup (MEB) management. (so does MEM/EM - MEM supports backup monitoring only). You can still use mysqldump/Percona Xtrabackup.
3. No Enterprise software repository configured:
    - Cannot deploy a new MySQL Enterprise cluster/server via ClusterControl. Only import existing.
    - For scaling, the database software must be pre-installed manually on the new node.
4. SNMP monitoring.





# Migration Paths and Decision Frameworks

# Decision Framework: Which Road to Take?

- If you are all-in on Oracle stack
  - EM4MySQL likely the smoother fit
- If you want unified DB ops + hybrid flexibility
  - ClusterControl offers broader automation
- Budget & Ops Model
  - Account for licensing, infrastructure, and run costs
- Time to Value
  - Pilot both on a subset; compare alert fidelity & TCO

# Costs, Risks, and Mitigations

- Costs: Licensing & Infrastructure
  - Budget both software and host sizing
  - Right-size retention and scraping intervals
- Risks: Operational Risk
  - Run in parallel; back out plan; keep MEM read-only during cutover
- Mitigations: Skills & Training
  - Short enablement for SRE/DBA teams
  - Docs and runbooks updated early

# Path A: MEM → EM

1. Inventory current MEM targets, alerts, custom rules
2. Map feature parity & gaps; define target Service Level Objective (SLO)
3. Pilot a subset of hosts; install OMA and add target; validate dashboards & alarms
4. Phased rollout: per environment/tier; run in parallel until parity
5. Decommission MEM after sign-off and docs handover

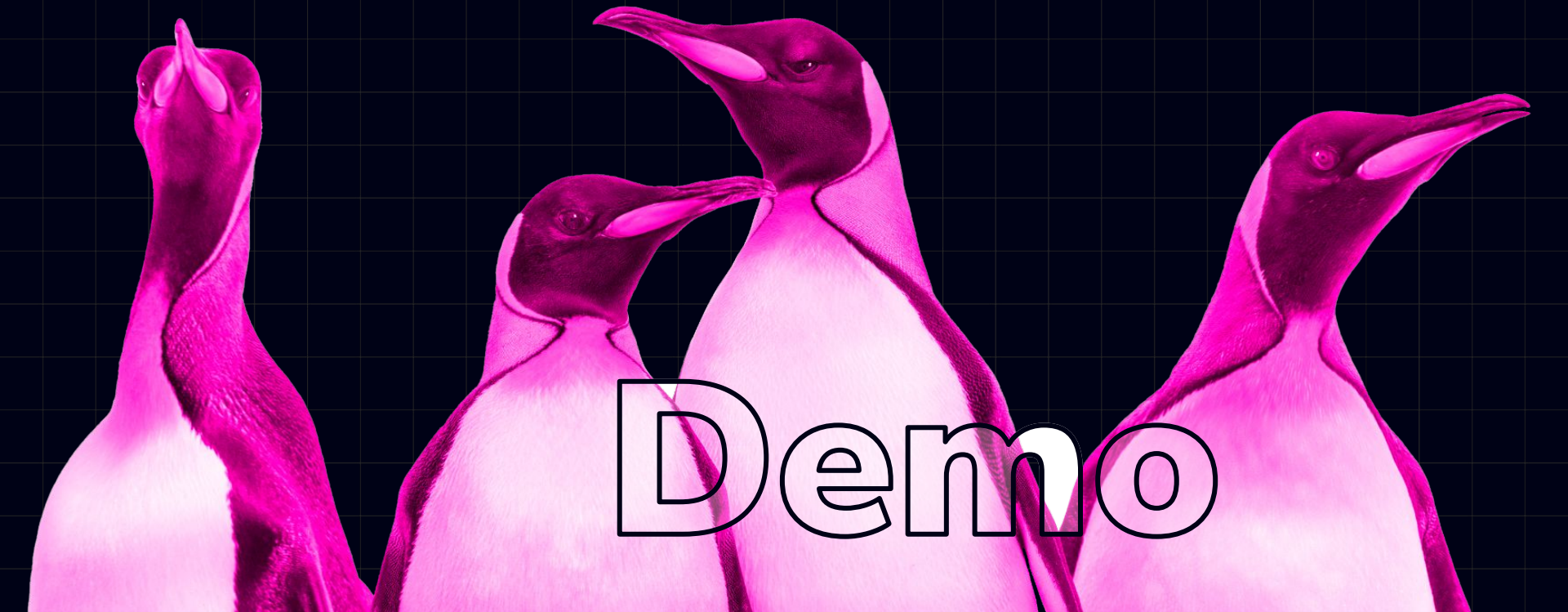
# Path B: MEM → ClusterControl

1. Stand up a ClusterControl server.
2. Configure SSH key-based authentication from ClusterControl server to all target nodes.
3. Import a subset of existing MySQL nodes into ClusterControl.
4. Enable monitoring, configure backup tools (Percona XtraBackup) and disable automatic recovery. Configure notification channels, SMTP settings and schedule operational reports.
5. Test ClusterControl management & scaling features via GUI and CLI - automatic recovery, promote replica, backup/restore/PITR, add nodes, etc.
6. Cutover plan: Remove the target/instance from MEM, stop the MEM agent, decommission MEM.

# Action Plan (Next 30–60 Days)

- Week 1: Inventory MEM coverage, alert rules, dashboards
- Week 2: Stand up EM4MySQL and/or ClusterControl pilots
- Week 3-4: Validate parity, tune alerts, test failure & recovery
- Week 5-6: Expand rollout, finalize training, decommission MEM

# Short



# Demo

# Q&A

# Thank you!