

ORACLE®



MySQL in the Oracle Ecosystem

*Philip Antoniadis, Director Sales Consulting
MySQL Database*

Today's Agenda

- Oracle's Strategy and Investment in MySQL
- Oracle Product Certifications/Integrations for MySQL Enterprise Edition
 - Replication
 - Backup/Recovery
 - Operations and Business Intelligence
 - Security and Auditing
 - My Oracle Support
- Additional Resources
- Questions?

Giveaways courtesy of Ronald Bradford

<http://effectivemysql.com>



Safe Harbor Statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions.

The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

UNMATCHED INVESTMENT

InnoDB

PERFORMANCE IMPROVEMENTS

REPLICATION

EMBEDDED

CLOUD

WINDOWS

HUNDREDS OF EXPERTS

ORACLE DRIVES MySQL INNOVATION

STRATEGIC

WORLD-CLASS SUPPORT

MySQL CLUSTER

WEB

NoSQL

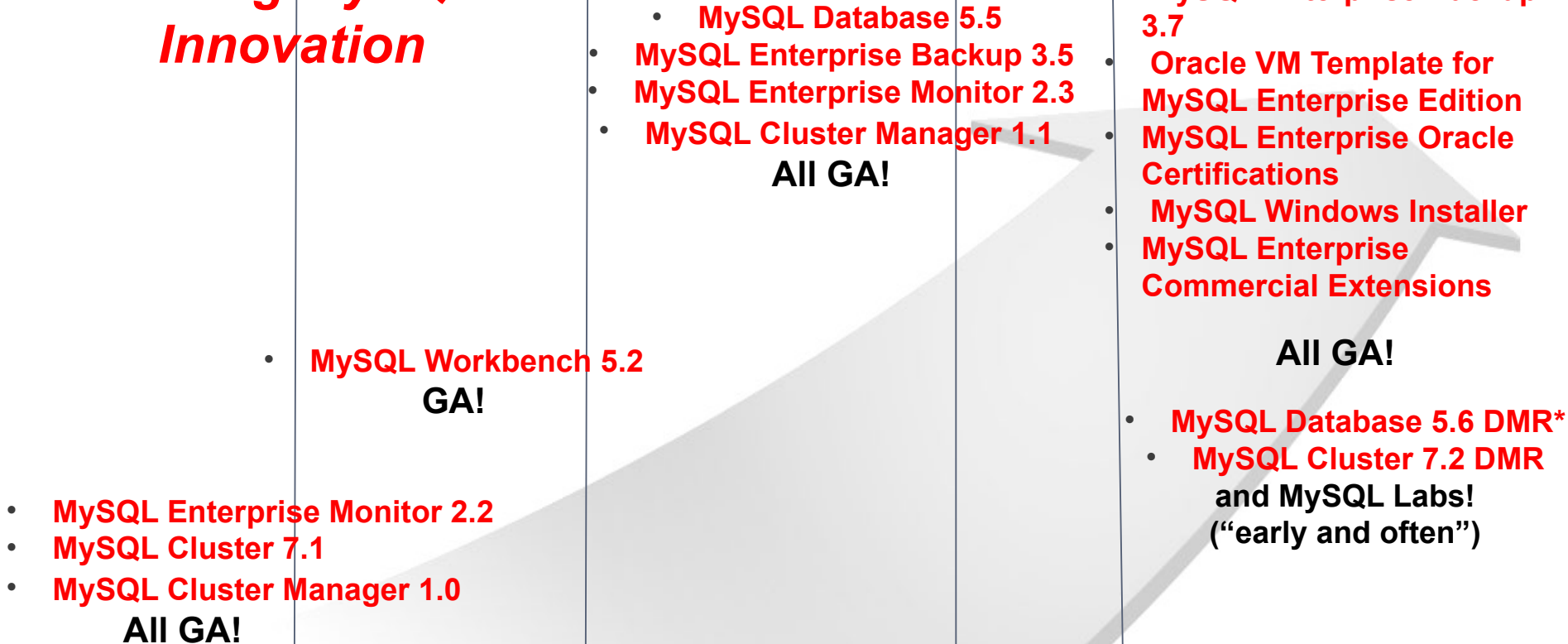
LINUX

MySQL ENTERPRISE EDITION

LARGEST MySQL ENGINEERING & SUPPORT ORGANIZATION

More Product Releases Than Ever Before

Driving MySQL Innovation



A Better MySQL

***Development Milestone Release**

Q2 CY2010

Q3 CY2010

Q4 CY2010

Q1 CY2011

Q2-4 CY2011

Oracle's Investment in MySQL

Rapid Innovation

Make MySQL a Better MySQL

- #1 Open Source Database for Web Applications
- “M” in most complete LAMP stack
- Embedded

Develop, Promote and Support MySQL

- Improved engineering, consulting and support
- Leverage 24x7, World-Class Oracle Support

MySQL Community Edition

- Source and binary releases
- GPL license



MySQL: Open Source (GPL)

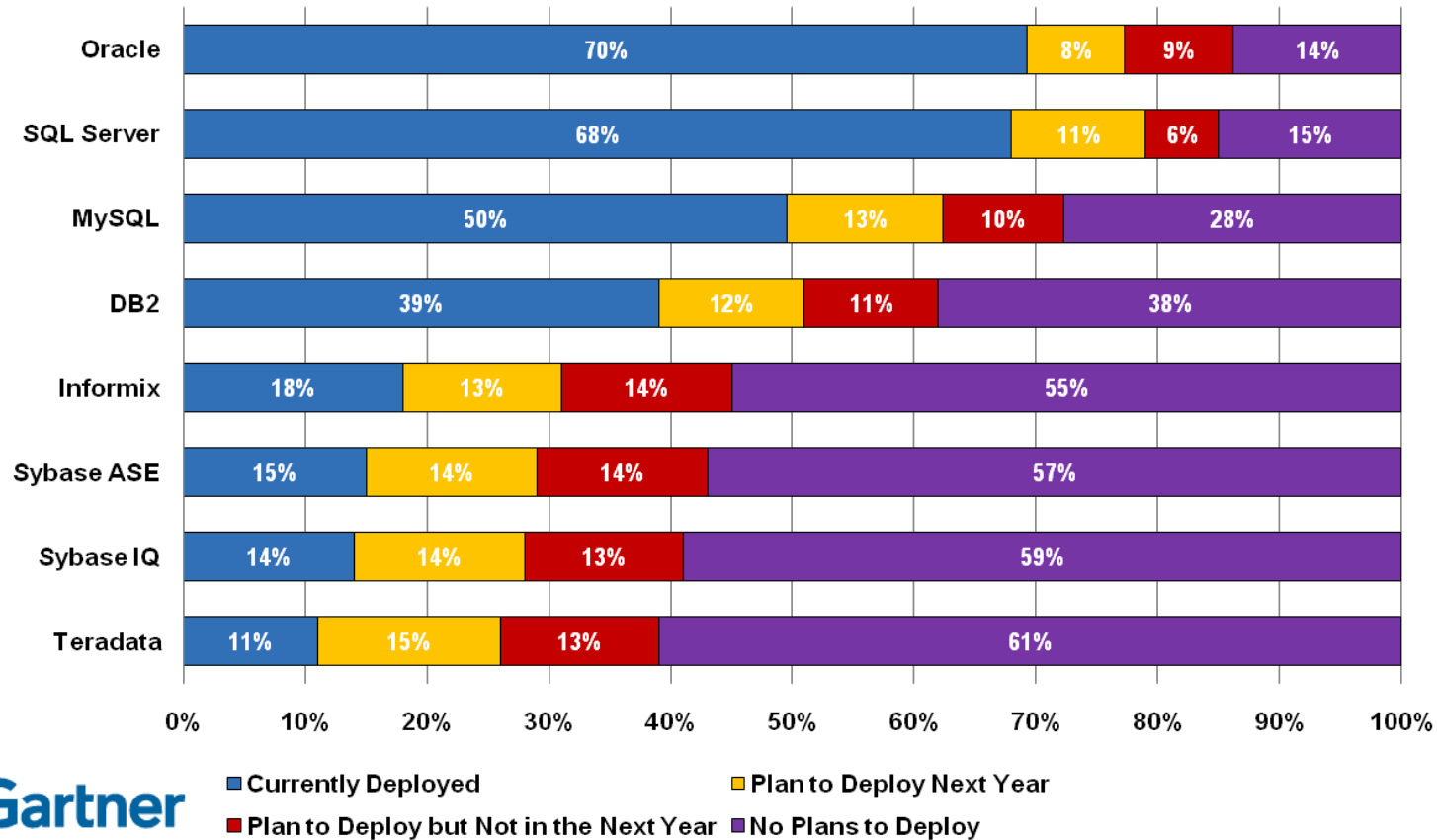
Available to download and use under the GPL:

- MySQL Database (Community Server)
- MySQL Cluster
- MySQL Workbench Community Edition
- MySQL Utilities (in Python)
- MySQL Connectors
- MySQL Proxy
- Documentation
- Forums

Set your ambitions high!



Oracle+MySQL Demographic



Estimate that 70% are using MySQL too

MySQL Database

Performance, Reliability, Ease of Use

Support for common development languages/platforms



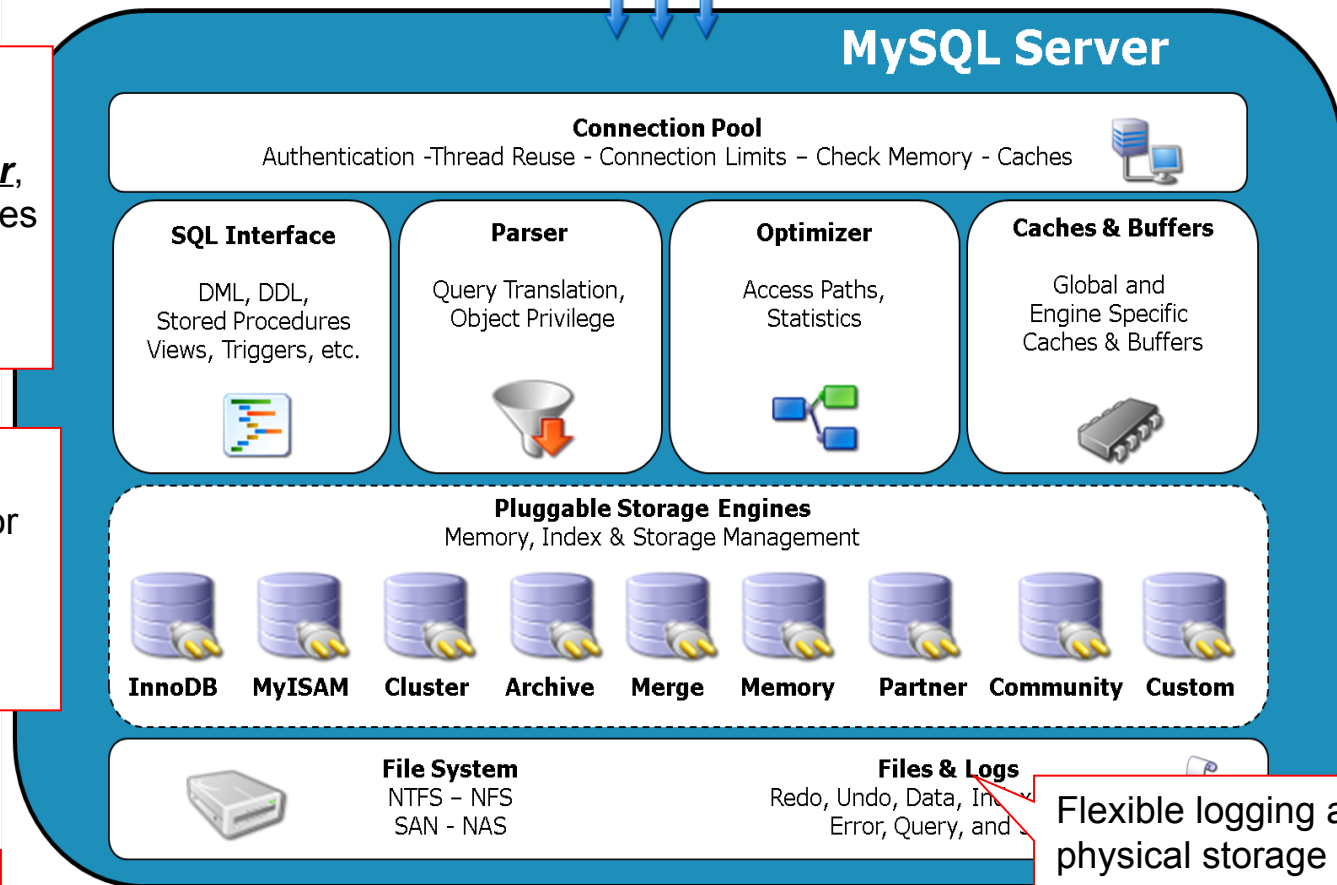
Connectors

Native C API, JDBC, ODBC, .NET, PHP, Python, Perl, Ruby, VB

Efficient multi-threaded session handling

Full DML, DDL parsing, cost based **optimizer**, caching of queries and result sets

Flexible Storage Engine options for application specific storage needs



Flexible logging and physical storage options

MySQL Database

Performance, Reliability, Ease of Use

Support for common development languages/platforms



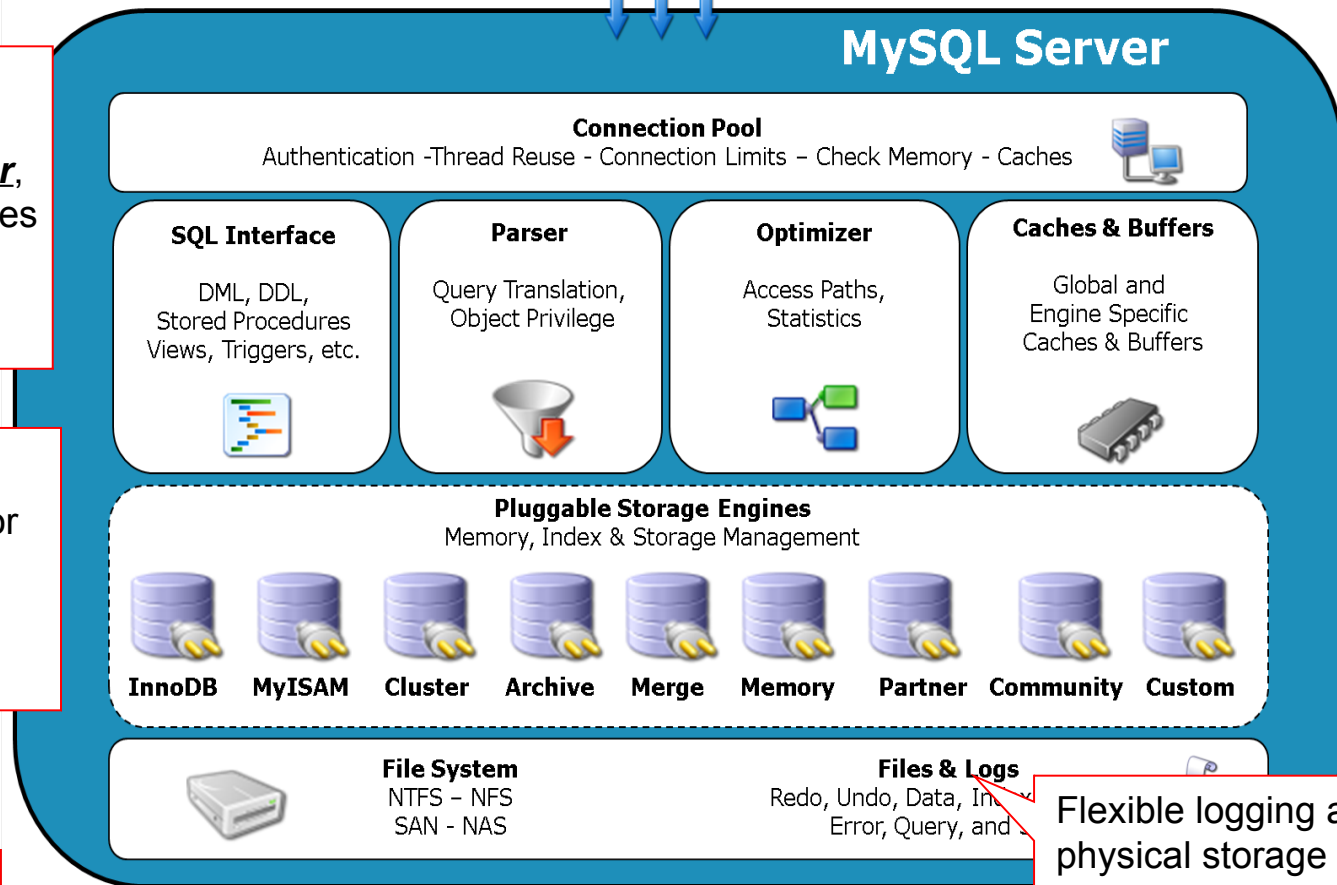
Connectors

Native C API, JDBC, ODBC, .NET, PHP, Python, Perl, Ruby, VB

Efficient multi-threaded session handling

Full DML, DDL parsing, cost based **optimizer**, caching of queries and result sets

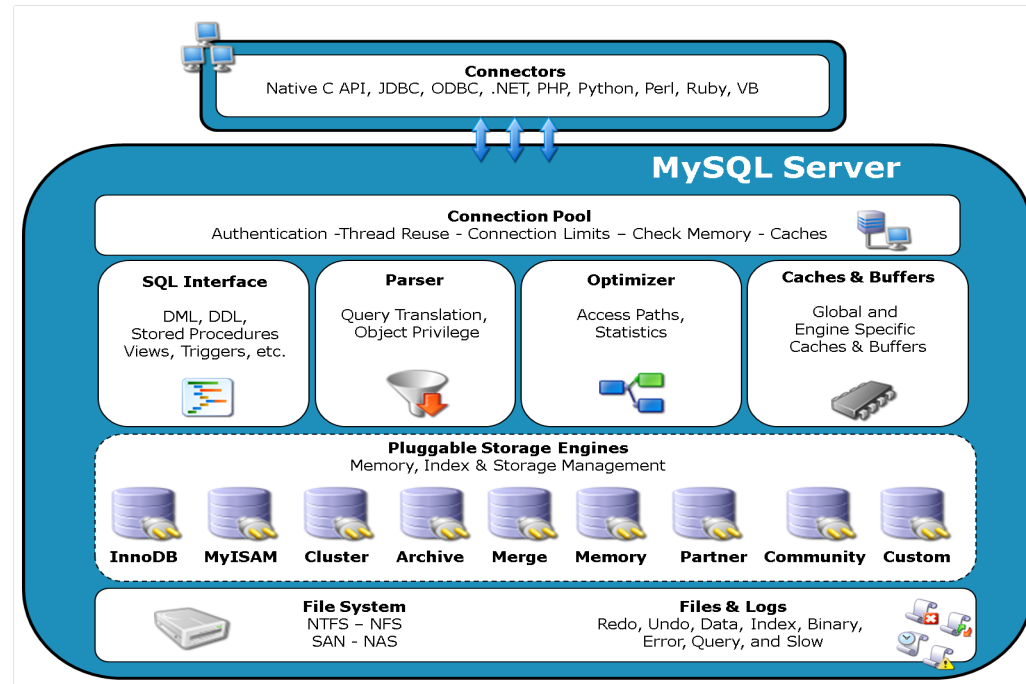
Flexible Storage Engine options for application specific storage needs



MySQL Database

InnoDB - Transactional by Default

- Default Storage Engine for MySQL 5.5 and above
- ACID-compliant transactions, MVCC
- Row-level locking
- Two phase commit
- Efficient indexing
- Fast DDL operations
- Table compression
- Automatic crash recovery
- Referential integrity
- Online backup
- More



> 95% of all MySQL apps run on InnoDB

MySQL 5.6: A Better MySQL

- MySQL 5.6 builds on MySQL 5.5 by improving:
 - Optimizer for better Performance, Scalability
 - Performance Schema for better instrumentation
 - InnoDB for better transactional throughput
 - Replication for higher availability, data integrity
 - “NotOnlySQL” options for better flexibility

Web Cloud Embedded On-Premise

Try it now:

dev.mysql.com/downloads/mysql

Tough Questions

...performance issues?

...servers down?

...expensive, slow queries?

...security policies, change?

Where/When/How to Tune?

...Developers productive?

...Replication synch issues?

..version of MySQL to run?

...will systems scale?

...can I recover?

...managing Oracle and MySQL databases?

MySQL Enterprise Edition

Highest Levels of MySQL Scalability, Security & Uptime



ORACLE®

MySQL Enterprise Edition

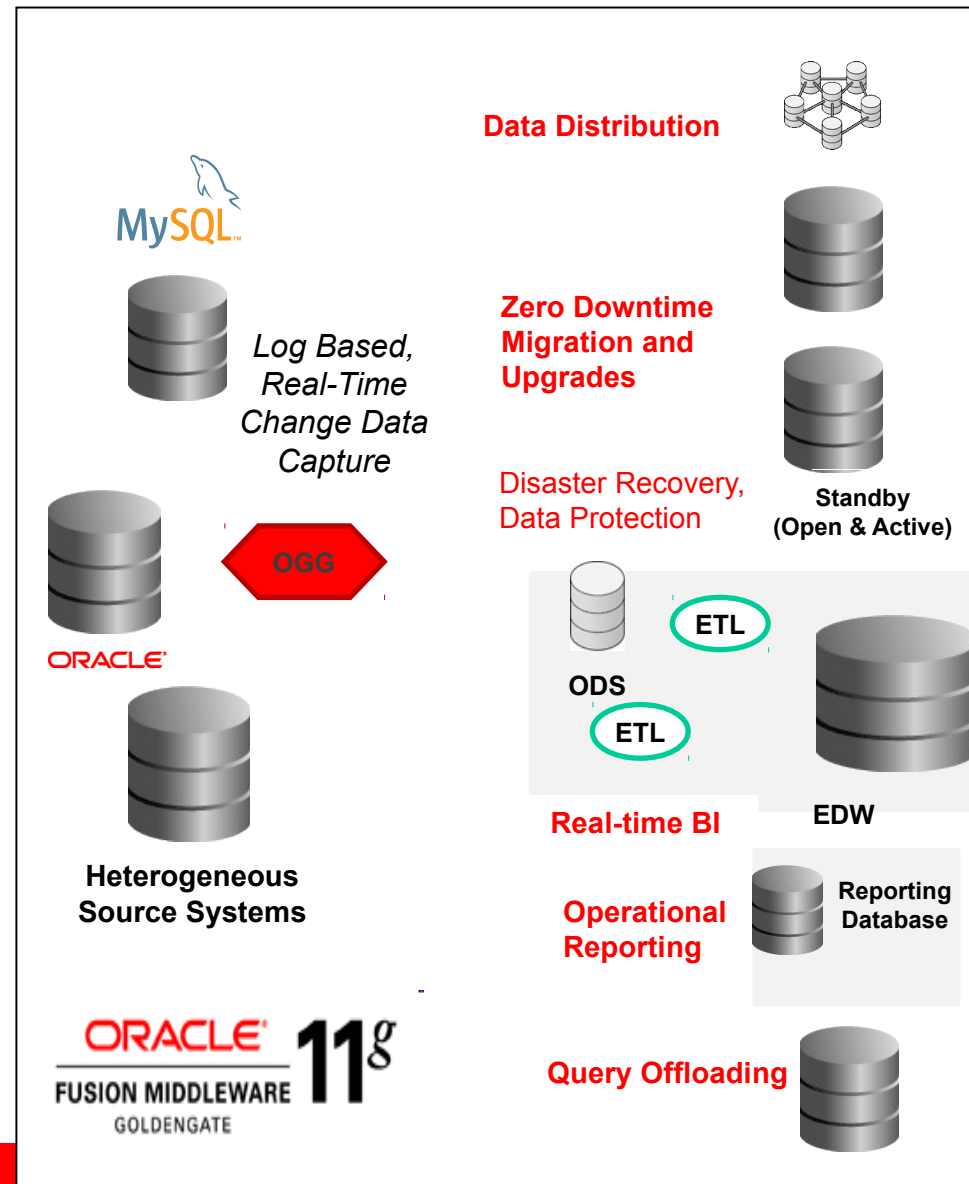
Enables you to manage your Oracle and MySQL databases with Oracle tools/solutions you are already using.



Oracle Integrations: Golden Gate

Available Now

- Heterogeneous Replication between MySQL, Oracle
- MySQL specific optimizations
- Hybrid web, enterprise applications (Sabre Holdings)
- Offload, scale query activity to MySQL read-only slaves
- Real-time access to web-based analytics, reporting
- Migration path from/to MySQL from other databases with minimal downtime
- **MySQL Cluster Cert (in progress)**



MySQL Enterprise Backup

- Online Backup for InnoDB
- Full, Incremental, Partial Backups (scriptable interface)
- Compression
- Point in Time, Full, Partial Recovery options
- Metadata on status, progress, history
- Unlimited Database Size
- Cross-Platform
 - Windows, Linux, Unix
- Certified with Oracle Secure Backup

*Ensures **quick, online backup and recovery** of your MySQL apps.*

Oracle Certifications: Secure Backup

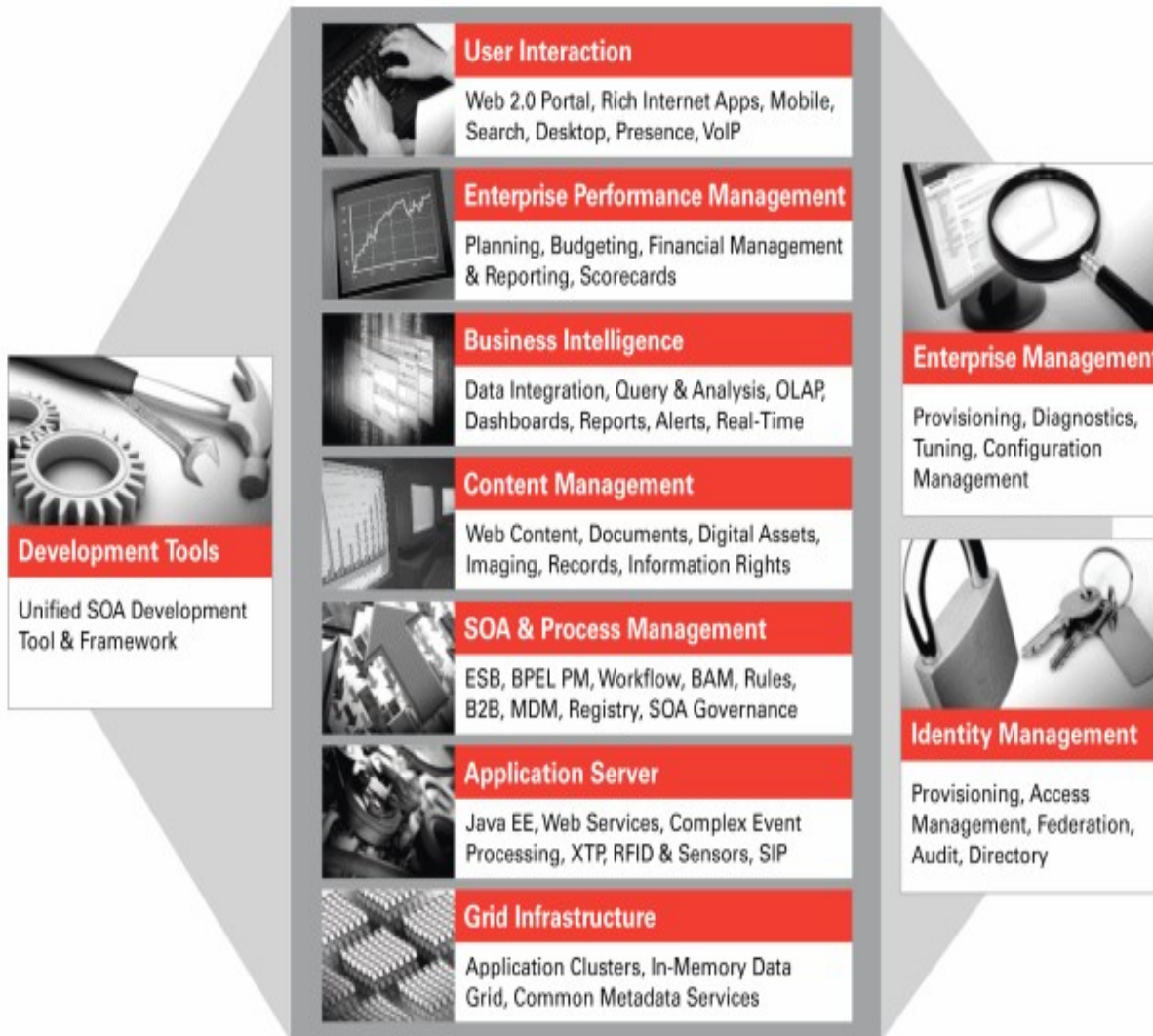
Available Now

- MySQL Enterprise Backup images to tape (like RMAN)
- Via SBT interface (standard for MMS)
- Encryption, policy-based management, vault rotation
- Common management, SOP for Oracle, MySQL backups

```
mysqlbackup
  --port=3306
  --protocol=tcp
  --user=root
  --password
  --backup-image=sbt:backup-
shoeprod-2011-10-02
  --backup-dir=/backup backup-to-image
```



Oracle Fusion MiddleWare (FMW)



ORACLE® **11g**
FUSION MIDDLEWARE



Oracle Certifications: FMW

Available Now

- WebLogic Server
- Database Adapter for Oracle SOA Suite **
- Oracle Business Process Management **
- Oracle Virtual Directory
- Oracle Data Integrator
- Oracle Enterprise Performance Management **
- Oracle Identity Analytics
- Open SSO STS, Open SSO Fedlet

All via MySQL 5.x JDBC driver

** 11.1.1.6 MySQL as a Metadata Repository option
(planned)



Oracle Certifications: FMW

Planned

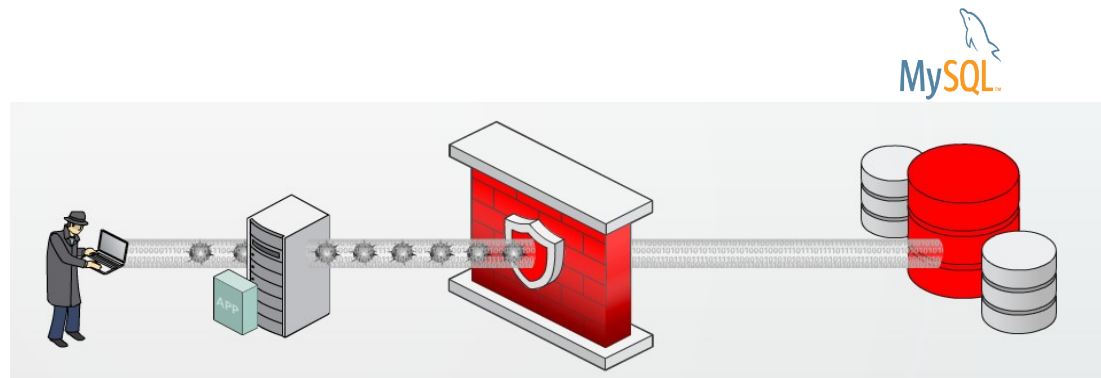
- WebCenter Suite
- Enterprise Content Management
- Oracle Business Intelligence Suite
- Via MySQL 5.x JDBC driver
- MySQL as a Metadata Repository option



Oracle Integrations: DB Firewall

Available Now

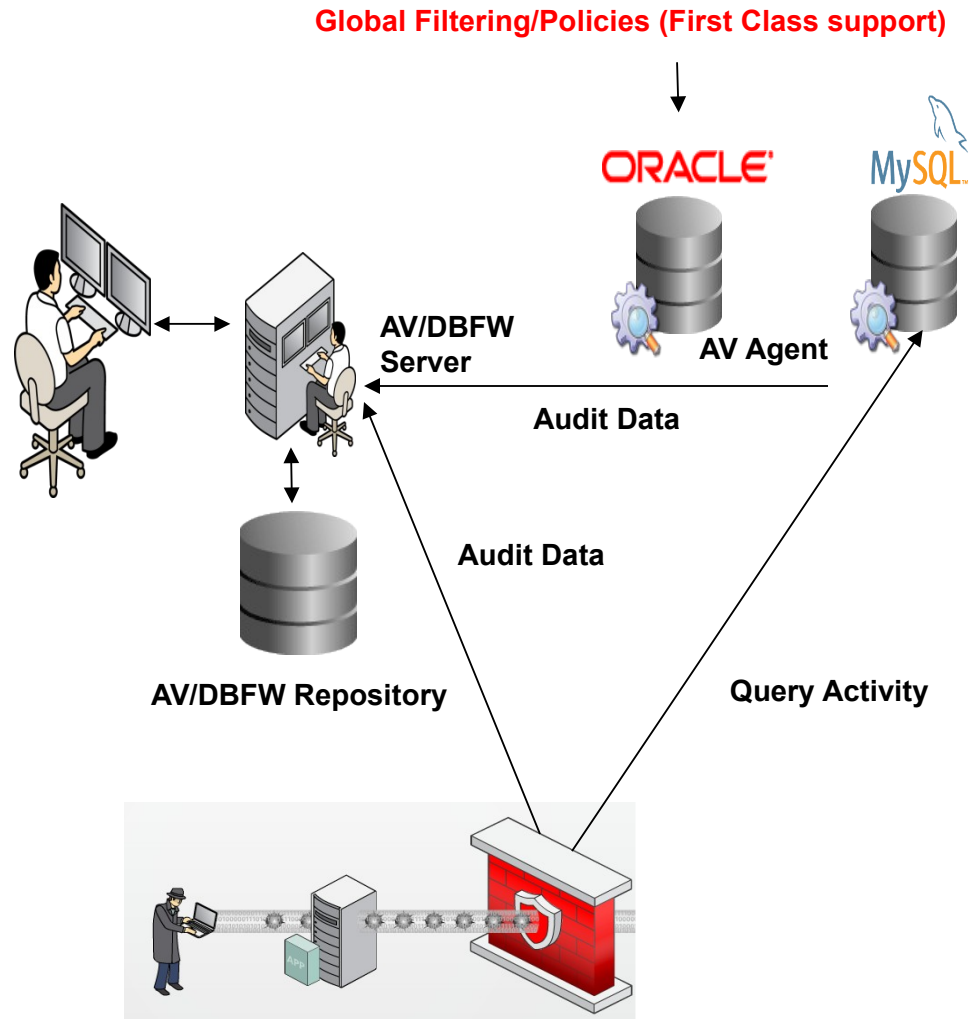
- Network-based protection against
 - Unauthorized access
 - SQL injection
 - Privilege, role cloaking or escalation
 - Others
- Blocking, Logging, Reporting, console-based management
- Accurate platform specific grammar-based detection
- Oracle, MySQL, other non-Oracle databases



Oracle Integrations: Audit Vault/DBFW

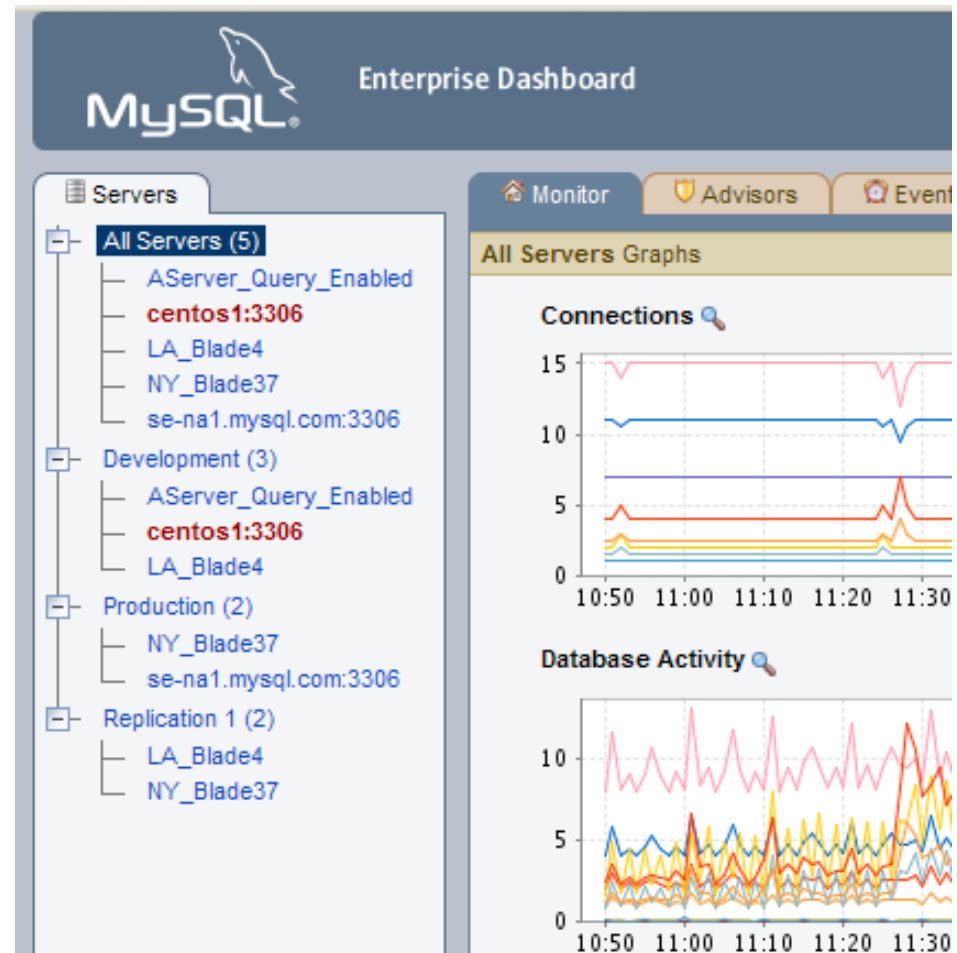
Planned

- MySQL 5.5 audit stream
- Collects, consolidates audit data for all Oracle, MySQL servers
- Reporting, analysis, threat detection
- Centralized management, monitoring, compliance for Oracle, MySQL applications
- Plug-in for Oracle Enterprise Manager 11g and higher



MySQL Enterprise Monitor

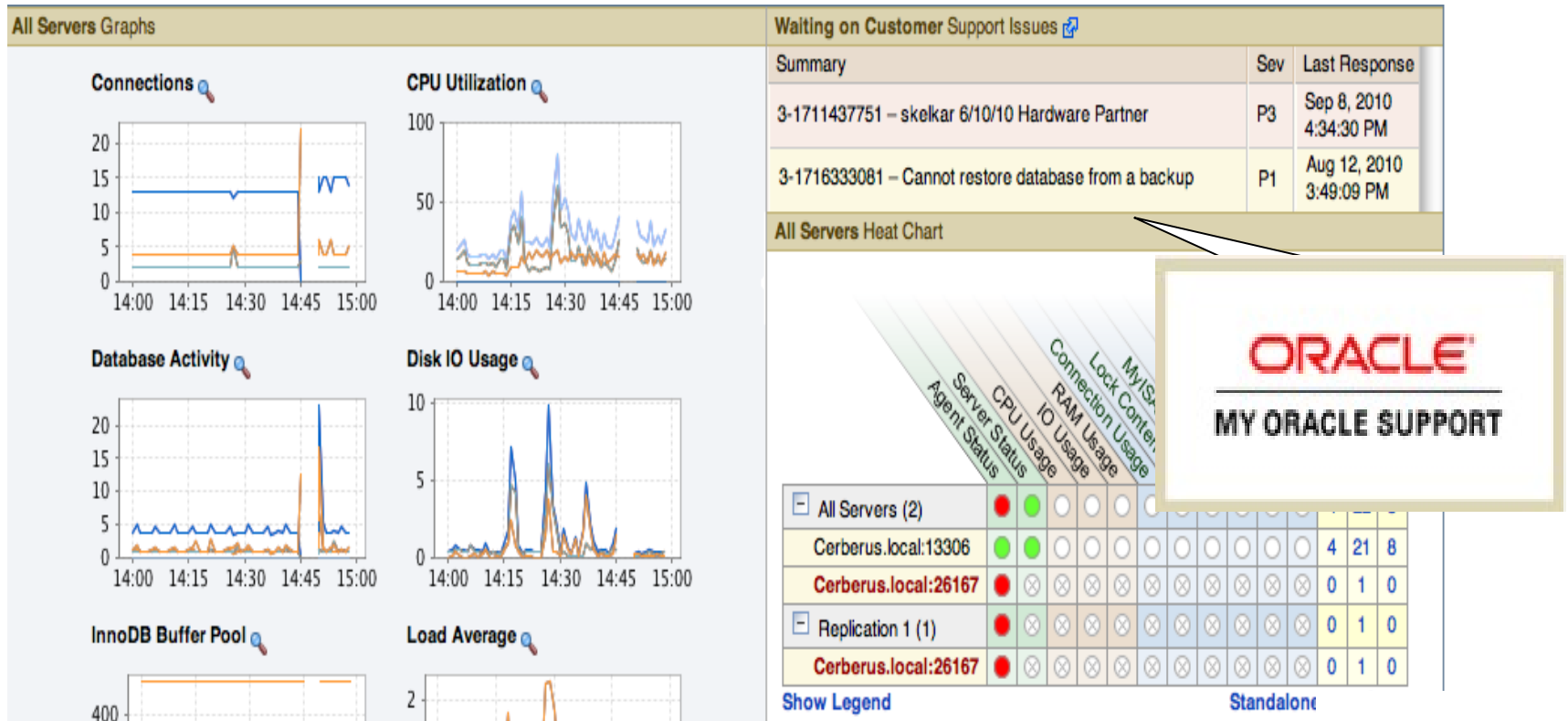
- Web-based, global view of MySQL applications (on-premise and Cloud deployments)
- Automated, rules-based monitoring and alerts (SMTP, SNMP enabled)
- Query capture, monitoring, analysis and tuning, correlated with Monitor graphs
- Visual monitoring of “hot” applications and servers
- Real-time Replication Monitor with auto-discovery of master-slave topologies
- Integrated with MySQL Support



A Virtual MySQL DBA Assistant!

Oracle Integrations: MOS

Available Now



MySQL Enterprise Monitor

- Collect MySQL diagnostics and upload to MySQL Support
- Track MOS SRs from Enterprise Dashboard



Oracle Integrations: OEM

Planned

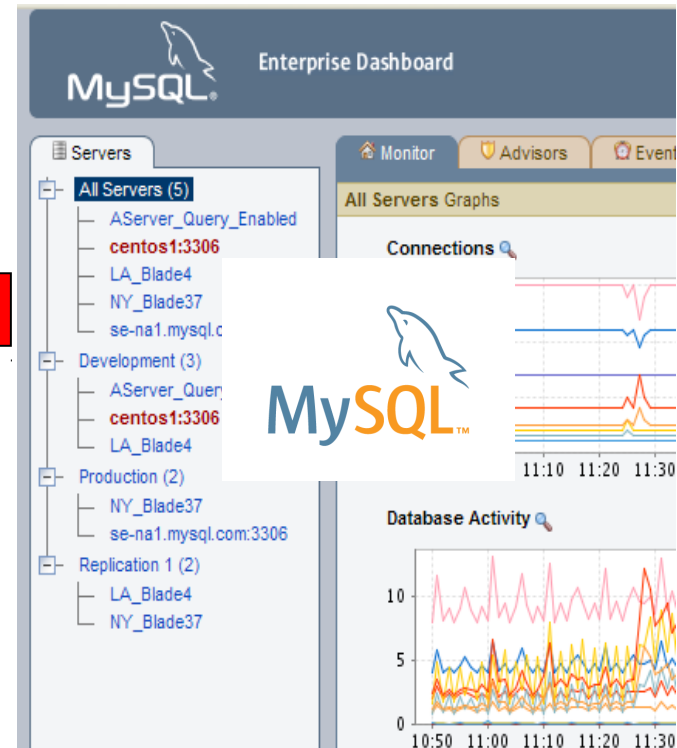
Oracle Enterprise Manager (12c)



Heterogeneous
Environments



MySQL
Monitoring
Data via
MP++ Grid
Control
plugin



MySQL Only
Environments

Oracle Integrations: OEM

Planned

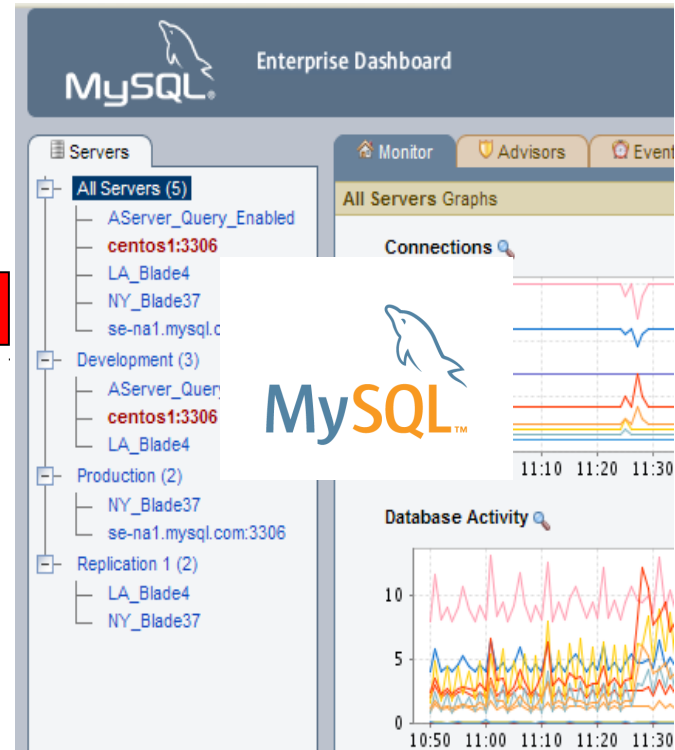
Oracle Enterprise Manager (12c)



Heterogeneous
Environments



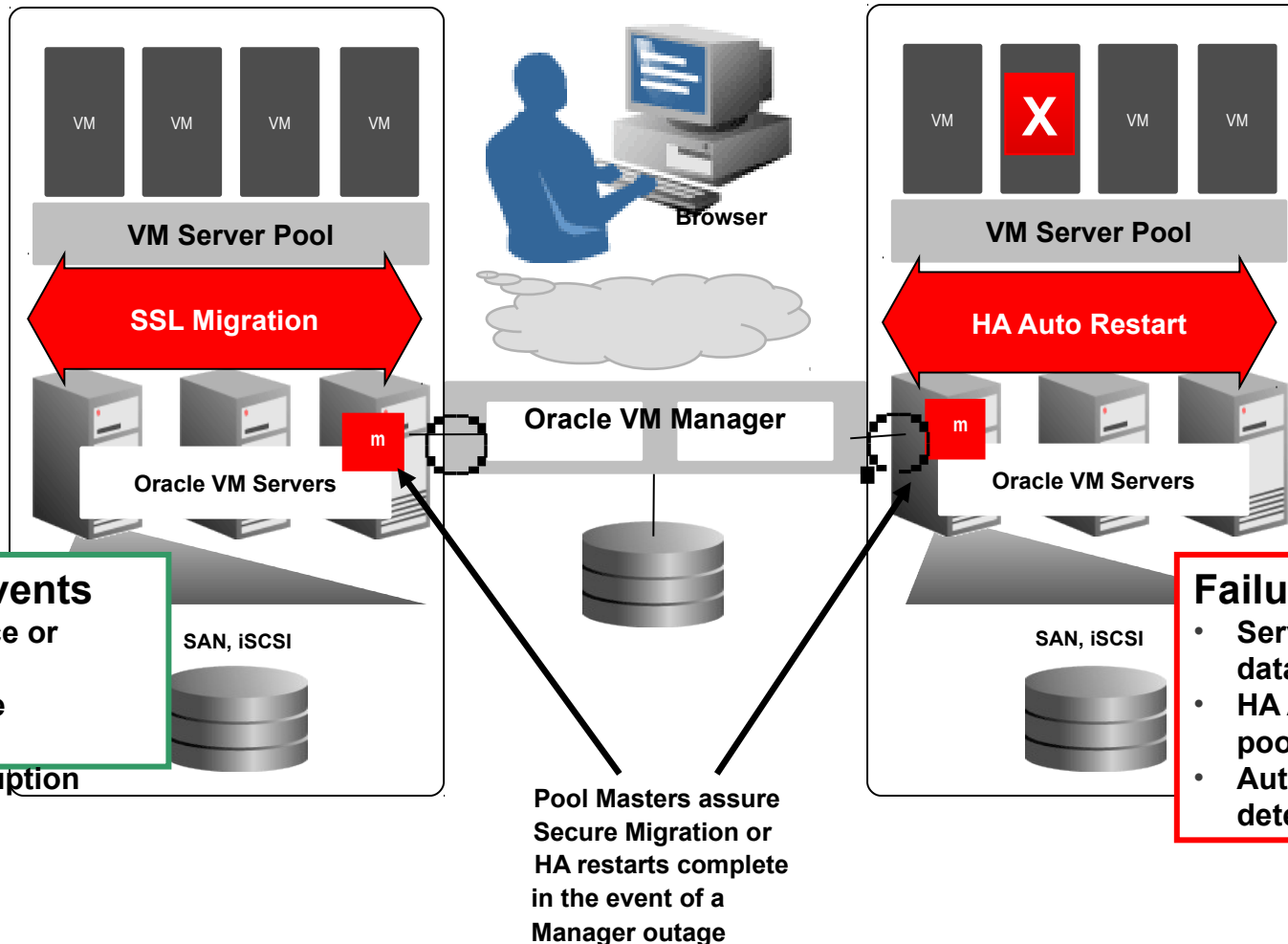
MySQL
Monitoring
Data via
MP++ Grid
Control
plugin



MySQL Only
Environments

MySQL Enterprise HA: Oracle VM

Protecting Against Planned/Unplanned Downtime

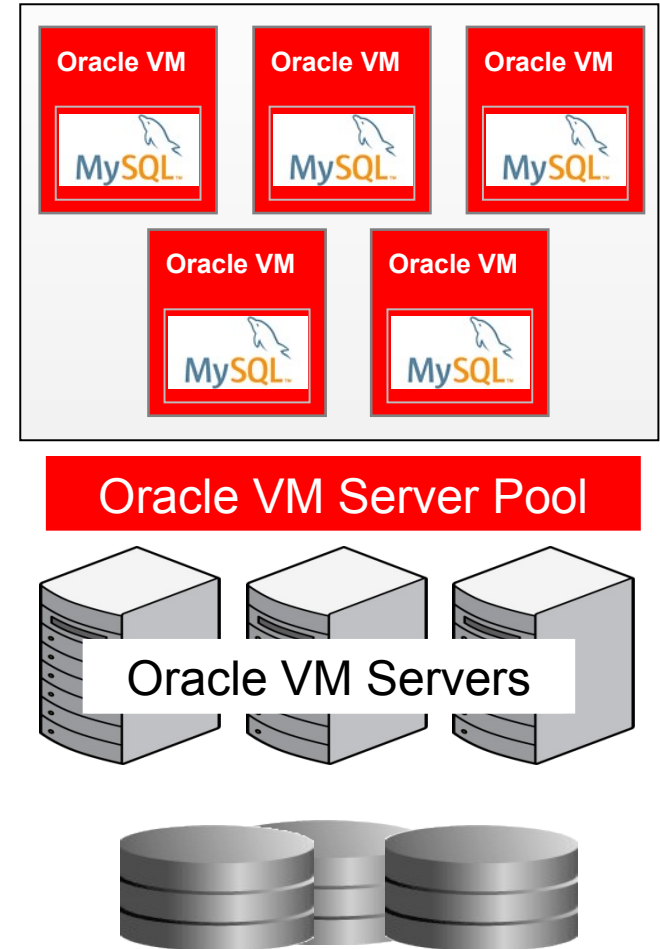


MySQL Enterprise HA: Oracle VM Template for MySQL

Available Now

Fastest, simplest & most reliable way to deploy virtualized, cloud-ready MySQL instances, certified for production use

- Rapid **DEPLOYMENT**
- Increased **RELIABILITY**
- Higher **AVAILABILITY**
- Lower **COST**

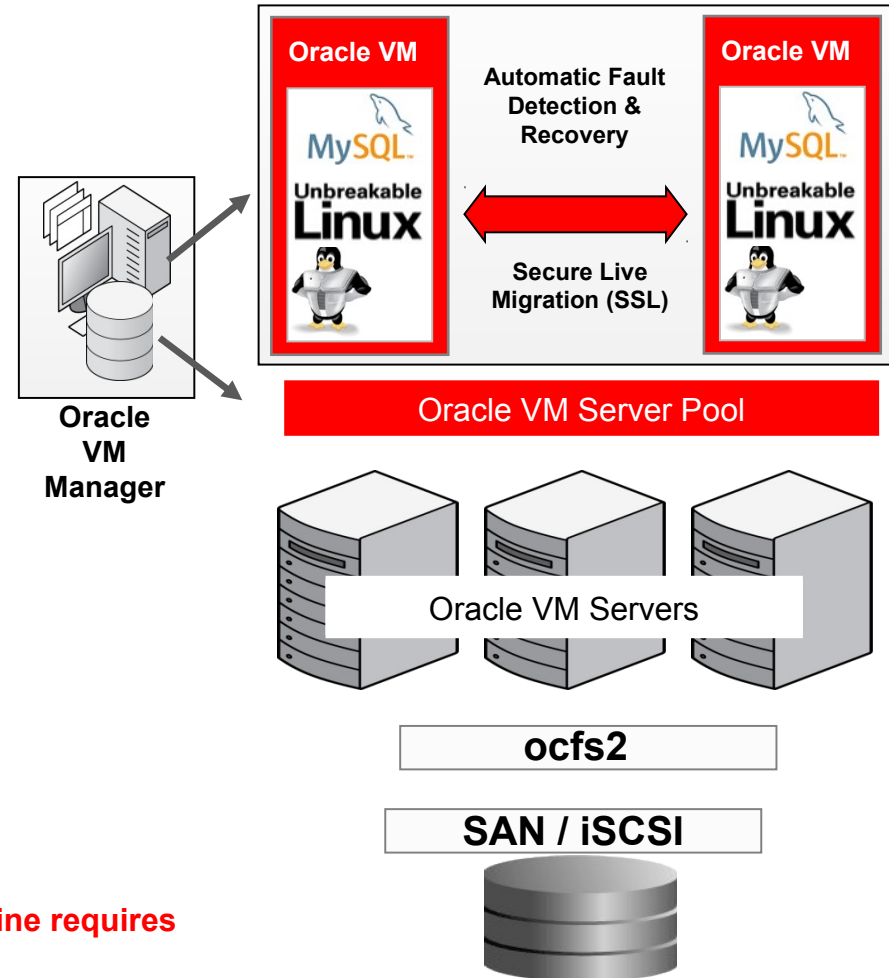


MySQL Enterprise HA: Oracle VM

Template Components

- Oracle Linux with the Unbreakable Enterprise Kernel
- Oracle VM
- Oracle VM Manager
- Oracle Cluster File System 2 (OCFS2)
- MySQL Database (Enterprise Edition)

Pre-Installed & Pre-Configured
Full Integration & QA Testing
Single Point of Support**



**** Technical support for Oracle Linux and Oracle Virtual Machine requires Unbreakable Linux Network subscription.**

Oracle Certifications/Integrations

Available Now, In Progress

- Oracle Linux
- Oracle Solaris
- In progress
 - Oracle ClusterWare
 - Oracle Cluster for Solaris
 - And more...

The Oracle logo, consisting of the word "ORACLE" in a bold, red, sans-serif font.

Oracle Premier Support for MySQL

Rely on The Experts - Get Unique Benefits

- Straight from the Source
- Largest Team of MySQL Experts
- Backed by MySQL Developers
- Forward Compatible Hot Fixes
- MySQL Maintenance Releases
- MySQL Support in 29 Languages
- Direct Access to MySQL Support Engineers
- 24/7/365
- Unlimited Incidents
- Knowledge Base
- MySQL Consultative Support

Only From
Oracle

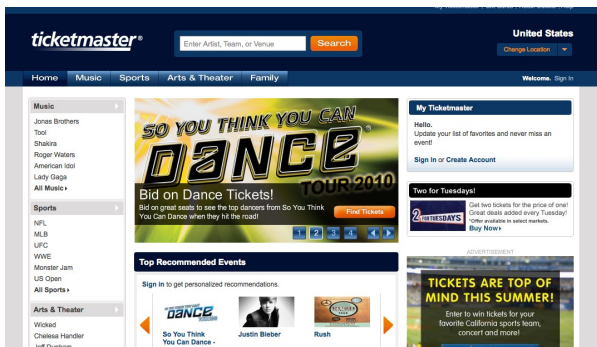
"The rep that assisted me was simply outstanding. He immediately recognized the cause of my problem and provided the resolution."

mysql.com/support/quotes

Ticketmaster.com

Application

Ticketmaster.com is an e-commerce website selling tickets for live concerts, professional and college sports teams, museums and theaters.



Key Business Benefit

By migrating from Microsoft SQL Server to MySQL and Oracle, Ticketmaster.com scales 4 times better and grows the number of customers from 10 million to 100 million.

Why MySQL and Oracle?

"At Ticketmaster, we use MySQL and Oracle to complement each other. The end result is a highly-distributed, optimal-performing database environment that powers one of the largest e-commerce and ticketing sites in the world."

Ed Presz

**Sr. Director Database Engineering
Ticketmaster/Live Nation Entertainment, Inc.**



Application

Real-time personalization platform to display advertising to more relevant buyers and conduct more effective merchandizing.

Key Business Benefits

Highly scalable and cost-effective system that handles all of eBay's personalization and session data needs. Manages 4 billion requests per day of 50/50 read/write operations.

Why MySQL Enterprise?

- Cost-effective
- Performance: 13,000 TPS on Sun Fire x4100
- Scalability: Designed for 10x future growth
- Monitoring: MySQL Enterprise Monitor

***Chris Kasten,
Kernel Framework Group, eBay***

Tough Questions, Real Solutions

...performance issues?

- MySQL Enterprise Scalability
- MySQL Enterprise Monitor, Advisors, Query Analyzer
- MySQL Consultative Support

...expensive, slow queries?

- MySQL Enterprise Monitor, Query Analyzer

Where/When/How to Tune?

- MySQL Enterprise Monitor, Advisors, Query Analyzer
- MySQL Consultative Support

...Replication synch issues?

- MySQL Enterprise Monitor, Replication Monitor
- Oracle Premier 7x24 Support

...will systems scale?

- MySQL Enterprise Scalability
- MySQL Enterprise Monitor, Advisors, Query Analyzer
- MySQL Consultative Support

...servers down?

- Oracle Premier 24x7 Support
- MySQL Enterprise Monitor, Advisors
- MySQL Enterprise High Availability

...security policies, change?

- MySQL External Authentication
- MySQL Enterprise Monitor, Security Advisor

...Developers productive?

- MySQL Workbench SE
- MySQL Enterprise Monitor, Query Analyzer

...version of MySQL to run?

- Oracle Premier 24x7 Support

...can I recover?

- MySQL Enterprise Backup

...managing Oracle and MySQL databases?

- MySQL Enterprise Oracle Certifications/Integrations

Summary

Oracle is making MySQL better for all

MySQL can be deployed and managed using Oracle products

Use of MySQL with Oracle products is fully supported under MySQL Enterprise Edition

Learn More

- mysql.com
 - MySQL Products and Editions
 - TCO calculator
 - White Papers
 - Customer use cases and success stories
- dev.mysql.com
 - Downloads
 - Documentation
 - Forums
 - PlanetMySQL
- eDelivery.oracle.com
 - Download and evaluate all MySQL products



Hardware and Software

The Oracle logo consists of the word "ORACLE" in white, uppercase, sans-serif font, centered within a solid red rectangular bar.

ORACLE®

Engineered to Work Together