



# MySQL Embedded Server 5.1

*For OEMs, ISVs and VARs*

*"MySQL is easy to use, reliable, and has stood the test of time. Plus, the performance of MySQL is unmatched. MySQL is making a lot of my customers very happy right now!"*

**Michael Patterson**  
President  
Plixer International

MySQL Embedded Server is full-featured, zero administration database that enables ISVs and OEMs to bring their applications and solutions to market faster. MySQL's small footprint, zero administration and support for 20+ platforms gives ISVs and OEMs ultimate flexibility to ship a highly reliable SQL compliant, transactional database with just about any software application or hardware appliance.

The MySQL Embedded Server enables OEM/ISV/VARs to:

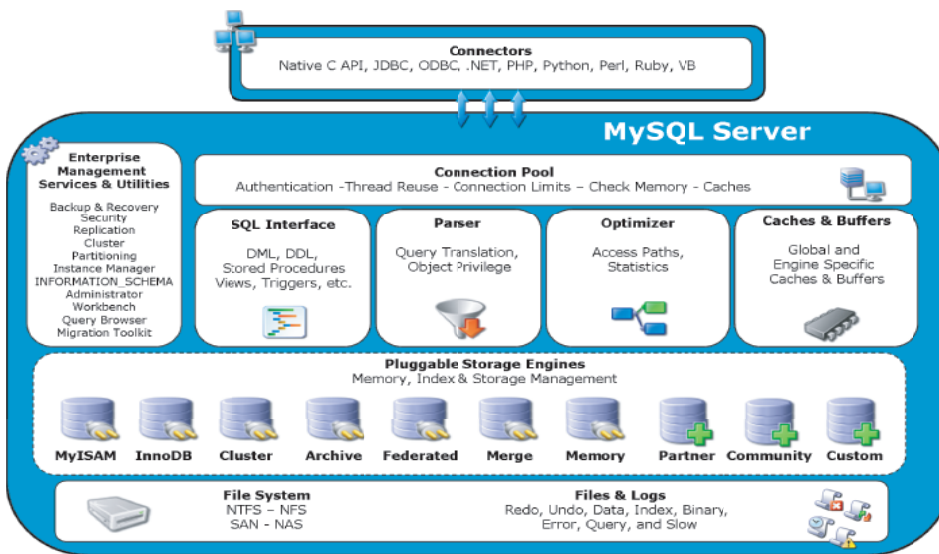
- **Reduce COGS and improve profitability** by embedding a cost-effective database without artificial license restrictions on CPU, memory, and servers
- **Bring applications to market faster** by embedding a proven database rather than building and maintaining a proprietary database in-house
- **Deliver a differentiated solution** that can capture, store and report on data with speed and granularity by embedding a full-featured, relational database

## HIGHLIGHTS

- Reduce COGS, Improve Margins
- Zero Administration
- High Reliability
- High Performance
- Small Footprint
- Standards-based
- Easy to Use
- Support for 20+ Platforms

- **Win competitive comparisons** using a SQL compliant, relational database with superior performance and reliability
- **Deliver a Zero Administration solution** so that their customer don't have to hire dedicated DBA resources
- **Make reporting and analysis easy** using a cost-effective open source reporting solutions like Jasper for MySQL: OEM Edition.





MySQL's Pluggable Storage Engine Architecture

## Pluggable Storage Engine Architecture

MySQL's unique Pluggable Storage Engine Architecture gives you the flexibility to optimize MySQL for your specific needs. MySQL provides storage engines that are ideally suited for heavy-duty transaction processing, terabyte-sized data warehouses and high availability applications.

## Robust Transaction Support

MySQL offers one of the most powerful transactional database engines on the market. It provides complete ACID (atomic, consistent, isolated, durable) transaction support, with commit, rollback, crash recovery, and row-level locking. It also supports high concurrency and multi-version consistent read support. Full data integrity is also assured through server-enforced referential integrity.

## High-Performance

MySQL has always been recognized as a high-performance and efficient database, routinely posting top benchmark performance results for throughput and scalability.

Powerful administration features enable ISVs to fine-tune the server to optimize performance for the particular details of an embedded or bundled application.

## Reliability

Leading ISVs and VARs consistently choose MySQL for their most demanding applications because of MySQL's superior reliability and dependability. In a recent code inspection study by Reasoning, inc. the leading provider of automated software inspection services concluded that the code quality of MySQL was 6x times better than that of comparable proprietary code.

## Zero Administration

MySQL's ease of installation, self-management features like automatic space expansion, auto-restart, and dynamic configuration changes make it a perfect fit for shipping with packaged applications or hardware appliances. In fact, a MySQL installation is typically less than 15 minutes. These low/zero administration 15 features help lower management costs both for the OEM/ISV/VARs and their customers.

## Upgrade to MySQL 5.1

MySQL Embedded Server 5.1 includes numerous enterprise features to help ISVs/OEMs be more productive, provide more security and deliver more robust applications to their customers. Features include:

- Partitioning
- Replication
- Stored Procedures
- Triggers
- Views
- Information Schema

## Standards-based

MySQL provides support for ANSI SQL standards including Stored Procedures, Triggers, Views and Subqueries. Drivers are available for the most popular languages and standards, including: ODBC, JDBC, .Net, C, C++, C#, Java, PHP, Perl, Python, and Ruby.

## Support for 20+ Platforms

MySQL supports over 20 hardware and operating system platforms giving ISVs and OEMs the flexibility to ship their applications on Microsoft Windows, Macintosh, Linux, Embedded Linux, Sun Solaris, HP-UX, IBM AIX, Novell Netware, Mac OS X, and more.

## Commercial License

Flexible licensing terms can be tailored to meet the unique requirements of OEMs, ISVs and VARs interested in embedding or bundling MySQL.

Learn More About MySQL Embedded Server 5.1 Today!  
Visit [www.mysql.com](http://www.mysql.com)

# MySQL Embedded Server: Technical Specifications

## Flexible Architecture

- Open Source
- Multi-threaded
- Pluggable Storage-Engine Architecture
  - MyISAM
  - InnoDB
  - Merge
  - Memory
  - Archive
  - Cluster

## ANSI SQL Standards

- ANSI SQL
- SubQueries, Joins, Cursors
- Prepared Statements
- Views
- Triggers
- Stored Procedures
- User-Defined Functions
- Information Schema
- Unicode
- Referential Integrity
- Server-enforced Data Integrity
- Strong Data type Support (e.g. Numeric, VARCHAR, BLOB, etc.)
- Optimized Datatype Support (e.g. Tinyint, Smallint, Mediumint, Bigint, etc.)

## Replication, Cluster & High-Availability

- Built-in Replication Engine
  - Master/Slave
  - Dual Master
  - Replication Ring
  - Replication Tree
  - Row-based Replication
- Main Memory Cluster Engine with instant failover (available separately)

## Backup

- Auto-Restart/Recovery
- Backup and Point-in-Time Recovery
- Logical Online Hot-Backup
- Physical Online Hot-Backup (available separately)

## Storage Management

- Hassle-Free Storage Administration
- Automatic Space Expansion
- Built-in Space Reclamation
- Auto Undo/Rollback Management
- Customizable Storage Assignments
- Compressed and Archive Tables
- Packed Index Storage
- Works with NAS or SAN storage

## OLTP and Transactions

- ACID Transactions
- Commit, Rollback
- Foreign Keys, Referential Integrity
- Row-level Locking
- Customizable Lock Isolation Levels
- Distributed Transactions (XA)
- Snapshot Repeatable Reads (readers don't block writers and vice-versa)
- Timed Deadlock Detection

## Web Application optimized features

- Server-side Thread Pool
- Connection Thread Caching
- Query Results Caching
- Load Balancing
- Prepared Statements
- Full Text Search
- Multiple Character Sets
- Geospatial Support
- Multi-Terabyte Scalability

## Data Warehouse optimized features

- Fast Data Load Utility
- High-Speed Multi-Insert Function
- GROUP BY WITH ROLLUP
- Aggregate UDF
- Analytic SQL Functions
- Geospatial Support
- Archive Storage Engine for historical data
- Multi-Terabyte Scalability

## Partitioning (Table/Index)

- Range
- Hash
- List
- Key
- Composite

## Security

- SSL Support
- Built-in Data Encryption/Decryption
- Granular External Security Control
- Fine Grained Object Privileges
- View Support
- Triggers for auditing
- Query Logs for auditing
- Archive Storage Engine for auditing

## High-Performance

- Dynamic Memory Caches
- Unique Query Cache
- Multiple Index Type Support (B-tree, R-tree, Hash, etc.)
- Cost-based Optimizer
- High-speed Query Optimizer
- Diagnostics and SQL Tracing



## Manageability and Ease of Use

- Easy Install and Setup (under 15 minutes for all supported platforms)
- Dynamic Configuration Changes
- Information Schema
- Event Scheduler

## Graphical Tools

- MySQL Workbench

## Drivers

- MySQL Native C Library
- MySQL Drivers for ODBC, JDBC, .Net
- Community Drivers for PHP, Perl, Python, Ruby, etc
- MySQL Connector/MXJ for deployment as a JMX MBean

## Platforms

- 32 and 64 bit native binaries
- Operating Systems
  - Linux: RedHat, SuSE, Fedora, Debian
  - Unix: Solaris, HP-UX, AIX, SCO
  - BSD: FreeBSD
  - Apple: Mac OS
  - Windows: 2000, 2003, XP
  - Novell: NetWare
- CPUs
  - Intel x86, IA32, IA64
  - AMD Opteron
  - IBM PowerPC
  - Sun SPARC
- Additional platforms available

## MySQL ISV/OEM Customers (Partial List)

Adobe	NetIQ
Agilent	NetQoS
AIRBUS/EADS	Nortel
Alcatel Lucent	Novell
BMC Software	Omniure
Citrix	Openwave
Cisco	Proofpoint
eClinicalWorks	Quest Software
Ericsson	Sage Group
First Data	SAS
F5 Networks	Siemens
Hewlett Packard	Somix
HRsmart	Sony
Hyperion	Suzuki
IronPort Systems	Symantec
LeapFrog SchoolHouse	Synopsis
MacPractice	UPS
McAfee	Verisign
Motorola	Zimbra
NEC	

## MySQL is the Database of Choice for a Wide Range of Software Applications and Hardware Appliances

### Software Applications

- Network & Performance Management
- Monitoring Systems
- CRM & ERP
- Educational Software
- Email, Anti-spam software
- VoIP & Online Messaging
- Healthcare & Practice Mgmt.
- Biotech

### Hardware Appliances

- Networking Equipment
- Routers & Traffic Controllers
- Security Appliances
- Retail Kiosks
- Point-of-Sale (POS) Systems
- Diagnostic Instruments
- Sensory Devices
- And more...

## MySQL Products for ISVs, OEMs, and VARs

### MySQL Embedded Server *Classic Edition*

*MySQL Embedded Server - Classic* is the world's most popular open source database that enables you to rapidly deliver high performance, read-intensive applications. It is also recognized as an extremely reliable, easy to use, easy to configure database and is available on 20+ platforms.

### MySQL Embedded Server *Pro Edition*

*MySQL Embedded Server - Pro* provides all the benefits of MySQL Classic and enables you to deliver high-performance and scalable Online Transaction Processing (OLTP) applications. MySQL Pro includes a fully integrated transaction-safe, ACID compliant storage engine with full commit, rollback, crash recovery and row level locking capabilities.

### MySQL Embedded Server *Advanced Edition*

*MySQL Embedded Server - Advanced* is the most comprehensive edition of MySQL. It provides all the benefits of MySQL Pro and adds horizontal table and index partitioning for improving the performance and management of VLDB (Very Large Database). It includes support for popular types of partitioning including Range, Hash, Key, List and Composite.

## About MySQL

MySQL is the world's most popular open source database software. Many of the world's largest and fastest-growing organizations use MySQL to save time and money powering their high-volume Web sites, business-critical systems and packaged software – including industry leaders such as Yahoo!, Google, Alcatel-Lucent, Nokia, YouTube and Zappos.com.

For more information about MySQL, please go to [www.mysql.com/enterprise](http://www.mysql.com/enterprise)

To contact MySQL online or via telephone, please go to [www.mysql.com/contact](http://www.mysql.com/contact)



The World's Most Popular Open Source Database