



MySQL 5.0

The World's Most Popular Open Source Database

"To provide the best possible service requires maintaining a massive database that can meet extreme performance demands, with very high reliability. The MySQL database has easily met these needs, and for a low total cost of ownership."

Alan Walker
Vice President
[Sabre Labs/Travelocity.com](http://SabreLabs/Travelocity.com)

Enterprise Grade Database

MySQL 5.0 is the latest version of the world's most popular open source database. It gives corporate developers, DBAs and ISVs an array of new enterprise features to make them more productive developing, deploying, and managing industrial strength applications. MySQL 5.0 delivers new enterprise features, including:

- **ACID Transactions** to build reliable and secure business-critical applications
- **Stored Procedures** to improve developer productivity
- **Triggers** to enforce complex business rules at the database level
- **Views** to ensure sensitive information is not compromised
- **Information Schema** to provide easy access to metadata
- **Distributed Transactions (XA)** to support complex transactions across multiple databases in heterogeneous environments

MySQL combines enterprise grade reliability and performance with advanced SQL 2003 features, making it the most cost-effective database solution for your business critical applications.

NEW FEATURES

- **Stored Procedures**
- **Triggers**
- **Views**
- **Cursors**
- **Information Schema**
- **XA Distributed Transactions**
- **Faster Performance**

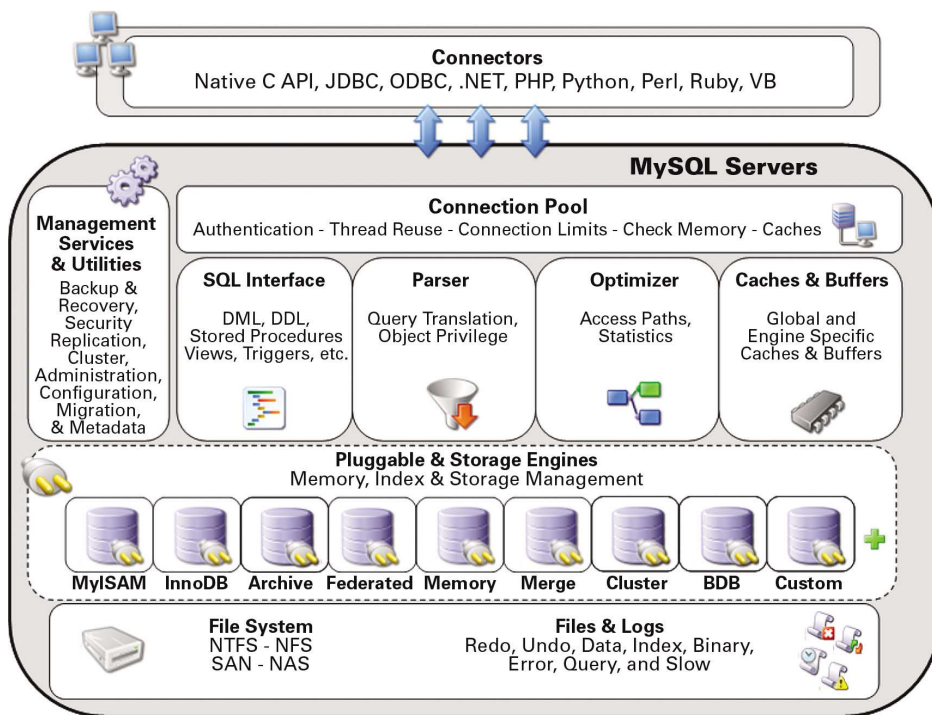
Reliability

MySQL is consistently recognized for its high quality and reliability. Leading organizations such as Sabre, Yahoo!, Lufthansa, and Cisco depend on MySQL to run their embedded, e-commerce, Web, and data warehousing applications. Plus, independent code quality inspection tests from Coverity, Klocwork, and Reasoning have shown that MySQL's open source approach results in code quality that is up to **6x better** than proprietary software.

Security

MySQL delivers product reliability and security your company can depend on. Powerful user authentication and authorization, as well as SSH and SSL support ensure you can protect your data assets.





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, high-traffic web sites, terabyte-sized data warehouses, and high availability applications. And because MySQL is open source, users can create custom storage engines to handle their unique requirements.

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 & Scalability

According to independent benchmarks, MySQL is a recognized leader in both pure performance and price/performance tests. Query caching delivers significant performance benefits. Flexible replication enables you to cost-effectively scale-out your database environment to increase both speed and scalability by easily adding more MySQL servers on low-cost commodity hardware.

Ease of Use & Administration

MySQL's ease of installation, deployment, and administration is unmatched. You can install and get MySQL up and running in less than 15 minutes, enabling you to deliver applications much faster than with other databases. In addition, MySQL requires little or no administration which significantly reduces the time and cost of maintaining your database infrastructure.

Cost-Effective

MySQL allows you to significantly reduce your database Total Cost of Ownership (TCO). On average, companies using MySQL are experiencing per-project savings of between \$250,000 and \$500,000. Larger enterprise deployments, are yielding savings in the millions of dollars. MySQL reduces database TCO by:

- Reducing licensing costs by over 90%
- Cutting system downtime by 60%
- Lowering hardware expenditure by 70%
- Reducing administration, engineering and support cost by up to 50%

For example, Sabre/Travelocity has saved over \$10 million using MySQL.

Ideally Suited for Web & Data Warehouse Scale-out

MySQL enables organizations to cost-effectively scale-out their Web and data warehouse applications using open source software and commodity hardware. Organizations can quickly deliver business-critical applications such as e-commerce, content management, user authentication/authorization, and real-time data warehouses using MySQL.

Backed by MySQL Network, Services & Support

MySQL Network provides a comprehensive set of enterprise-grade software, support and services directly from the developers of MySQL to ensure the highest levels of reliability, security and uptime.

Learn More About MySQL 5.0 Today! Visit www.mysql.com.

MySQL Database: 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
- Proven Load Balancing
- Distributed AutoIncrement
- 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

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

Fully backed by MySQL Network

- Certified Testing
- Indemnification
- 24x7 Production Support
- Online Knowledge Base
- Customized Advisors
- Targeted Alerts



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

Graphical Tools

- MySQL Workbench
- MySQL Query Browser
- MySQL Administrator
- MySQL Migration Toolkit

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

Partial List of MySQL Enterprise Customers

| | |
|--------------------------|--------------------------|
| Alcatel | Lucent |
| Amazon.com | Lufthansa |
| The Associated Press | NASA |
| Bank of America | Nortel |
| Caterpillar | NYSE |
| Continental Airlines | Sabre Holdings |
| DaimlerChrysler | Siemens |
| Deutsche Post | Southwest Airlines |
| Dow Jones | Time Inc. |
| Disney | UPS |
| Ericsson | US Army |
| Google | US Department of Defense |
| HypoVereinsbank | US Navy |
| Lockheed Martin | Wells Fargo |
| Los Alamos National Labs | Yahoo! |

Partial List of MySQL Partners

| | |
|---------------------|-----------|
| Actuate | JBoss |
| Business Objects | Novell |
| Computer Associates | Quest |
| Dell | Rackspace |
| Embarcadero | Redhat |
| GoldenGate | SAP |
| HP | Sun |
| Intel | Veritas |
| JasperSoft | Zend |

Partial List of MySQL ISV/OEM Customers

| | |
|----------------------|----------|
| Adobe | NEC |
| Agilent | NetIQ |
| BMC Software | NetQoS |
| Cisco | SAS |
| Hyperion | Suzuki |
| LeapFrog SchoolHouse | Symantec |
| Motorola | Verisign |

About MySQL

MySQL AB develops and supports the MySQL database server, the world's most popular open source database. Over six million installations use MySQL to power high-volume Web sites and other critical business systems — including industry-leaders like The Associated Press, Yahoo, NASA, Sabre Holdings and Suzuki.

MySQL is an attractive alternative to higher-cost, more complex database technology. Its award-winning speed, scalability and reliability make it the right choice for corporate IT departments, Web developers and packaged software vendors. MySQL is available through an open source GPL licence or MySQL Network, a comprehensive offering of certified software and premium support services.

For more information about MySQL, please go to www.mysql.com.



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