

MySQL for Beginners

Electronic Presentation

SQL-4401 Rev 2.1

D61918GC10
Edition 1.0
D61918GC10_EP

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MySQL® for Beginners



Revision 2.1

Time for Individual Presentations!

- **What is your background?**
 - Your name and your organization
 - How does your organization use MySQL?
- **Why are you here?**
 - What do you expect from the course?
 - What do you want to learn?

- Have experience using MySQL?
- Have experience from other SQL dialects?
- Have installed MySQL yourself?
- Use MySQL under Linux? Windows? Solaris? MacOSX? Other?
- Use MySQL 3.21? 3.22? 3.23? 4.0? 4.1? 5.0? 5.1?
- Use MySQL with PHP? Perl? Java? C? ODBC? Others?
- Are you MySQL Certified? Which certifications?

Practical Checklist

- Participant list -- email addresses -- checkup email
- Breaks -- timing, duration
- Where are the toilets/restrooms?
- Lunch arrangements
- Time allotted for exercises -- Solutions
- When does the day end? Can you stay longer?
- When do the days begin? Can you come earlier?
- Evaluation forms

Slide Format (Topic)

- Presentation sub-topics
 - More sub-topic information

Topics and
Sub-Topics,
presented
in detail
by instructor,
Following
Student Guide
content

Course Name
and Version

```
shell> mysql -h training.mysql.com -u wld world
```

Code
Examples

Current
Chapter Title

Current
<chapter.section>
Numbers and Title

Course Objectives (1/2)

- List the features and benefits of MySQL
- Find information about products, support and training
- Install and start the MySQL server
- Explain the basics of relational databases
- Distinguish the SQL language from MySQL language extensions
- Explain data/column types with regard to efficient database design
- Inspect design, structure and content of databases
- Design and Create an efficiently structured database
- Retrieve data using the SELECT statement

Course Objectives (2/2)

- Troubleshoot typical warnings and errors
- Modify and delete a database
- Modify and delete table row data
- Use data aggregation in queries
- Combine data from multiple tables using JOIN
- Write subqueries
- List simple functions (String, Date, Numerical)
- Understand the primary methods for exporting and importing data
- Describe MySQL connectors and their features
- Explain MySQL storage engine concepts

Course Chapter Map

1. INTRODUCTION

2. MySQL CLIENT/SERVER MODEL

3. DATABASE BASICS

4. DATABASE DESIGN

5. DATABASE CREATION

6. BASIC QUERIES

7. DATABASE MAINTENANCE

8. DATA MANIPULATION

9. FUNCTIONS

10. JOINING TABLES

11. EXPORTING AND IMPORTING DATA

12. SUBQUERIES

13. SUPPLEMENTAL INFORMATION

14. CONCLUSION

Learning Objectives

- Explain the origin and status of the MySQL product
- List the MySQL products and professional services
- Describe the MySQL Enterprise subscription
- List the currently supported operating systems
- Describe the MySQL Community web page
- Describe the MySQL Certification program
- List all the available MySQL courses

MySQL Overview

- Relational Database Management System Program Suite
- World's most popular open source database
 - Fastest growing with over 70,000 downloads per day
- Originally developed by MySQL AB (Sweden)



**MySQL is installed on every continent in the world
(Yes, even Antarctica!)**

Sun Acquisition of MySQL

- Acquired by Sun Microsystems in 2008
 - Giving MySQL the considerable resources of a major mainstream company
- Sun and MySQL together provide powerful, global product and services
 - Enterprise class support 24x7x365
 - More resources to draw from
 - More platform choices now available
- Both companies are strong open source supporters



Sun/MySQL Mission:

Make superior database software available and affordable to all!

You Are in Good Company!



Web / Web 2.0

Check Point™
SOFTWARE TECHNOLOGIES LTD.

OEM / ISV's



Adobe



On Demand, SaaS, Hosting



Telecommunications



Associated Press



Enterprise 2.0

Open-source is powering the World!

MySQL Database Server Products

- Enterprise Server
 - Enterprise-grade database
- Community Server
 - Database server for open source developers
- Embedded Database
 - Database server for OEMs/ISVs to bundle cost-effectively
- Cluster
 - Fault tolerant database clustering architecture
 - Carrier-grade availability and performance



MySQL GUI Tools

- Graphical User Interfaces to your MySQL database
- EOL (end-of-life) for MySQL GUI Tools Bundle
 - **MySQL Migration Toolkit**
 - Migration GUI Wizard
 - **MySQL Administrator**
 - Administration console
 - **MySQL Query Browser**
 - Create databases, execute and optimize SQL queries
- MySQL Workbench will contain the above GUI features starting with the 5.2 revision
 - Added to the existing Workbench features



Other MySQL Tools

- MySQL Workbench
 - Visual database design tool
 - Used to efficiently design, manage and document databases
 - Available in two editions
 - Community edition
 - Standard edition



- MySQL Proxy
 - A program that communicates between a client and a MySQL server
 - Can monitor, analyze or transform communication



MySQL Connectors

- MySQL Developed Connectors
 - MySQL C API
 - MySQL Connector/ODBC
 - MySQL Connector/J
 - MySQL Connector/.NET
 - MySQL Connector/C
 - MySQL Connector/C++
- Developed by Community
 - PHP
 - Perl
 - Python
 - Ruby
 - C++ Wrapper

Solutions for Embedding MySQL

- MySQL also provides libraries to embed a database
- `libmysqld`
 - Embedded edition of the `mysqld` server program wrapped in a shared library
 - Allows the MySQL to be embedded in C programs
- MySQL MXJ
 - A JAR wrapper around `mysqld` binaries
 - Allows java programs and J2EE environments to instantiate (and install) a MySQL server

MySQL Services

- MySQL Training
 - Comprehensive set of MySQL training courses
- MySQL Certification
 - High quality certification for MySQL Developers and Database Administrators
- MySQL Consulting
 - Full range of consulting services from start-up to optimization
- MySQL Support
 - Community
 - Enterprise (and other levels of purchased support)

MySQL Enterprise Subscription

- Annual offering
- Access to Enterprise Server and other premium products
- Enterprise-grade software, support and services
- Highest level of reliability, security and availability
- Pro-active services help eliminate problems *before* they occur



MySQL Enterprise Server

- Most reliable, secure, updated version of MySQL
- Updates and Service Packs
- Emergency Hot Fix builds
- Drivers (Connectors)
- Many different supported platforms



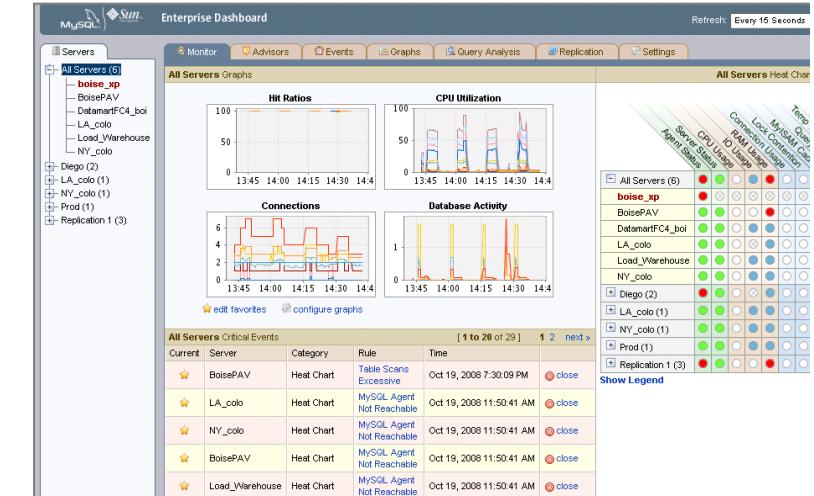
MySQL Enterprise Support

- 24x7 Production-level support
- Flexible service levels available
- High priority problem resolution
- Consultative Support
- Technical Account Manager (TAM)
- Online Knowledge Base



MySQL Enterprise Monitor

- Web-based monitoring and advising system
- Virtual DBA assistant
- Runs completely within corporate firewall
- Principle features:
 - Enterprise Dashboard
 - Server/group management
 - “At-a-glance” monitoring
 - MySQL & custom advisors/rules
 - Advisor rule scheduler
 - Customizable thresholds & alerts
 - Events and Alert history
 - Specialized scale-out assistance
 - Query Analyzer



Obtaining a MySQL Enterprise Subscription

- Contact sales personnel
- Purchase from our website
 - <https://shop.mysql.com/enterprise/>
- 30 day trial
 - Limited features
 - <http://www.mysql.com/trials/>

Contact Sales

USA - Toll Free:

 +1-866-221-0634 

USA - From abroad:

 +1-208-327-6494 

USA - Subscription Renewals:

 +1-866-830-4410 

Latin America:  +1 ... 

UK:  +44 845 399 1124 

Ireland:  +353 1 6919191 

Germany:

 +49 89 420 95 98 95 

France:  +33 1 70 61 48 95 

Sweden:  +46 730 207 871 

Benelux:

 +358 50 5710 528 

Italy:  +39 06-99268193 

Israel:  +358 50 5710 528 

Spain & Portugal:

 +34 933905461 

Other EMEA countries:

 +353 1 6919191 

Asia Pacific:

 +81 3 5843 1140 

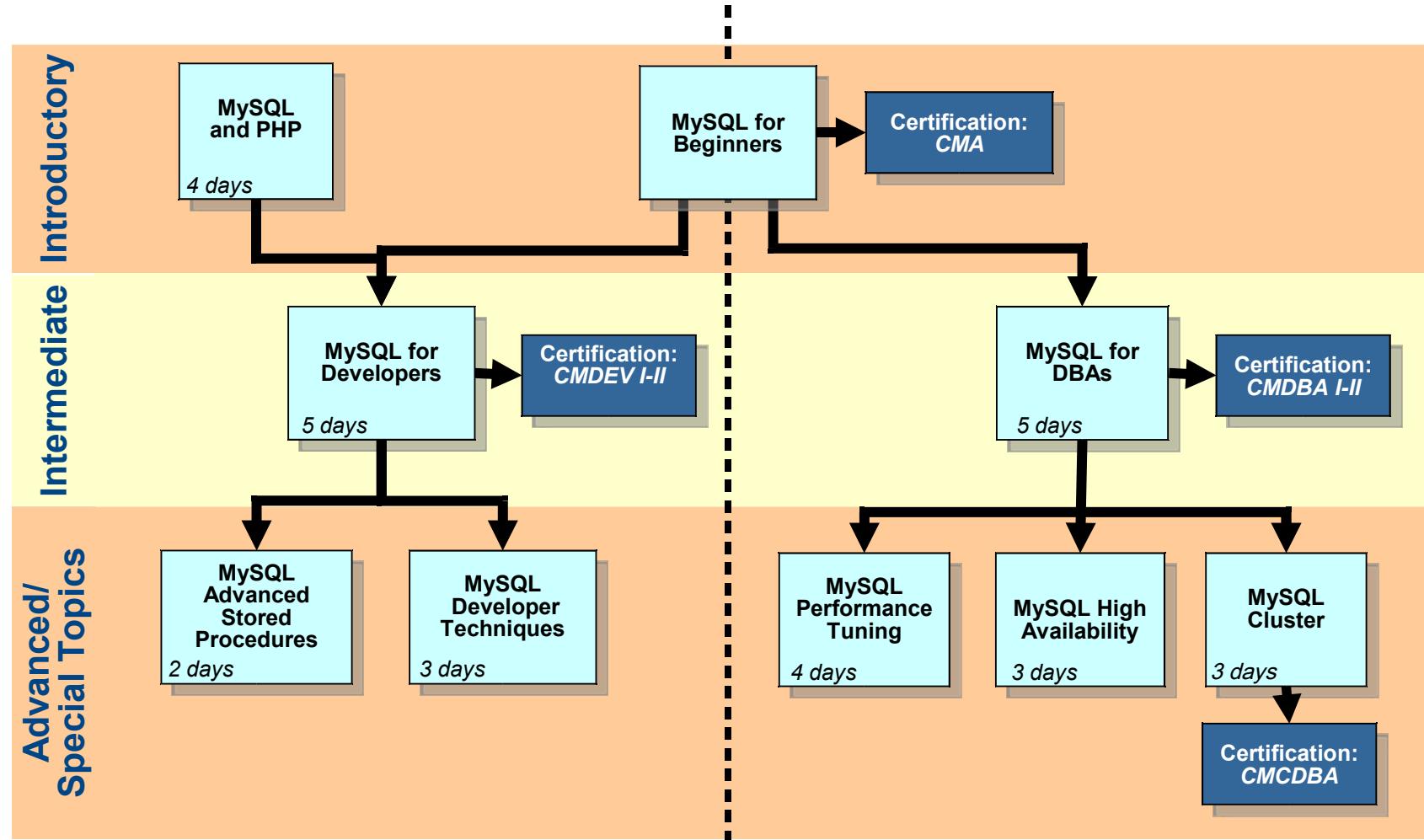
MySQL Supported Operating Systems

- More than 20 platforms
- Control and flexibility for users
- Currently available for MySQL download:
 - Windows (multiple)
 - Linux (multiple)
 - Solaris
 - FreeBSD
 - Mac OS X
 - HP-UX
 - IBM AIX and i5
 - Open BSD
 - SGI Irix
 - Novell NetWare
 - Source Code
 - Special Builds

Certification Program Overview

- MySQL certifications available
 - Certified MySQL Associate (CMA)
 - Certified MySQL 5.0 Developer (CMDEV)
 - Certified MySQL 5.0 Database Administrator (CMDBA)
 - Certified MySQL Cluster DBA (CMCDBA)
- Certification web page
 - <http://www.mysql.com/certification/>
- Exam administration
 - Administered in several locations world-wide

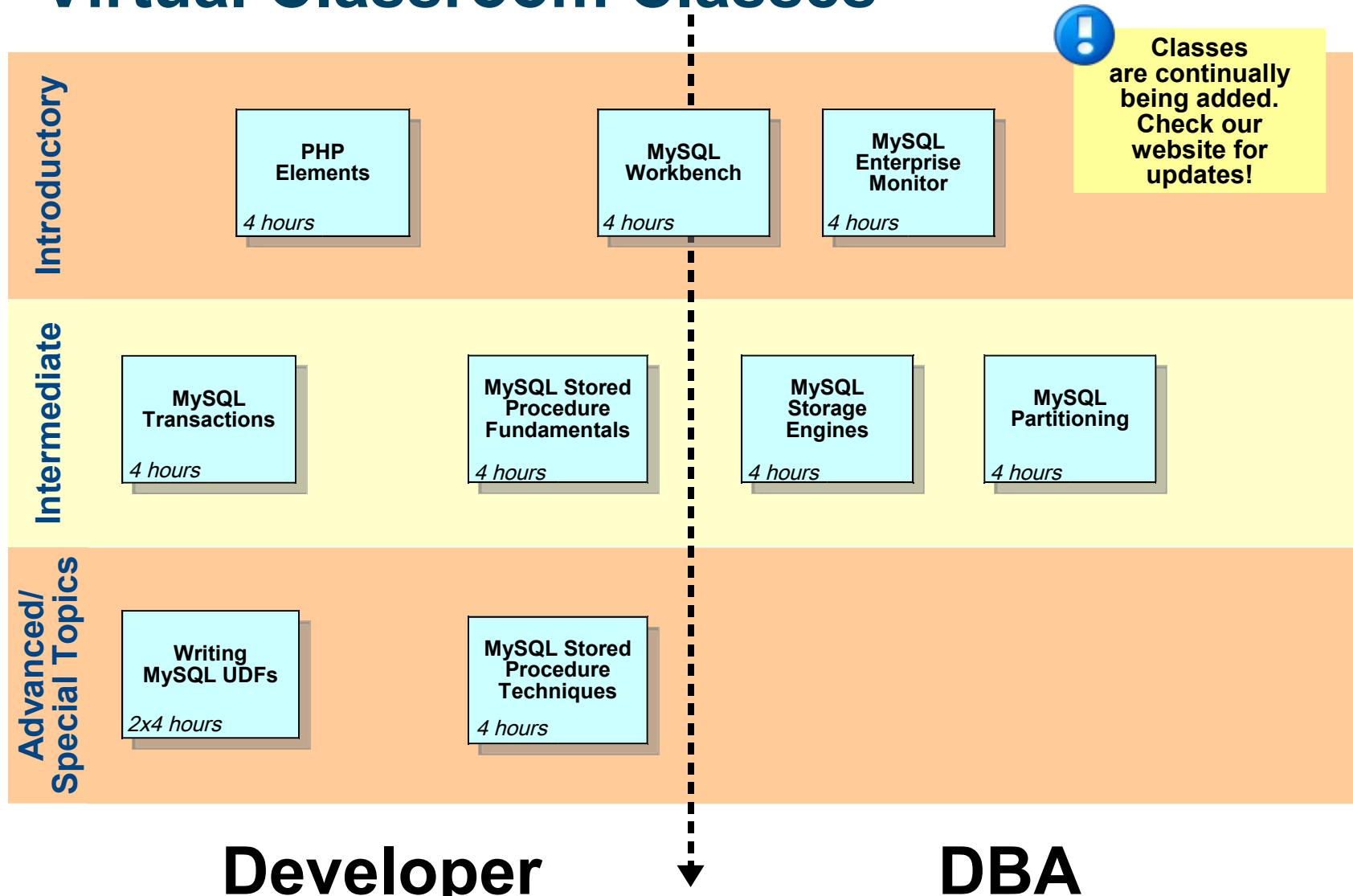
Curriculum Paths



Developer

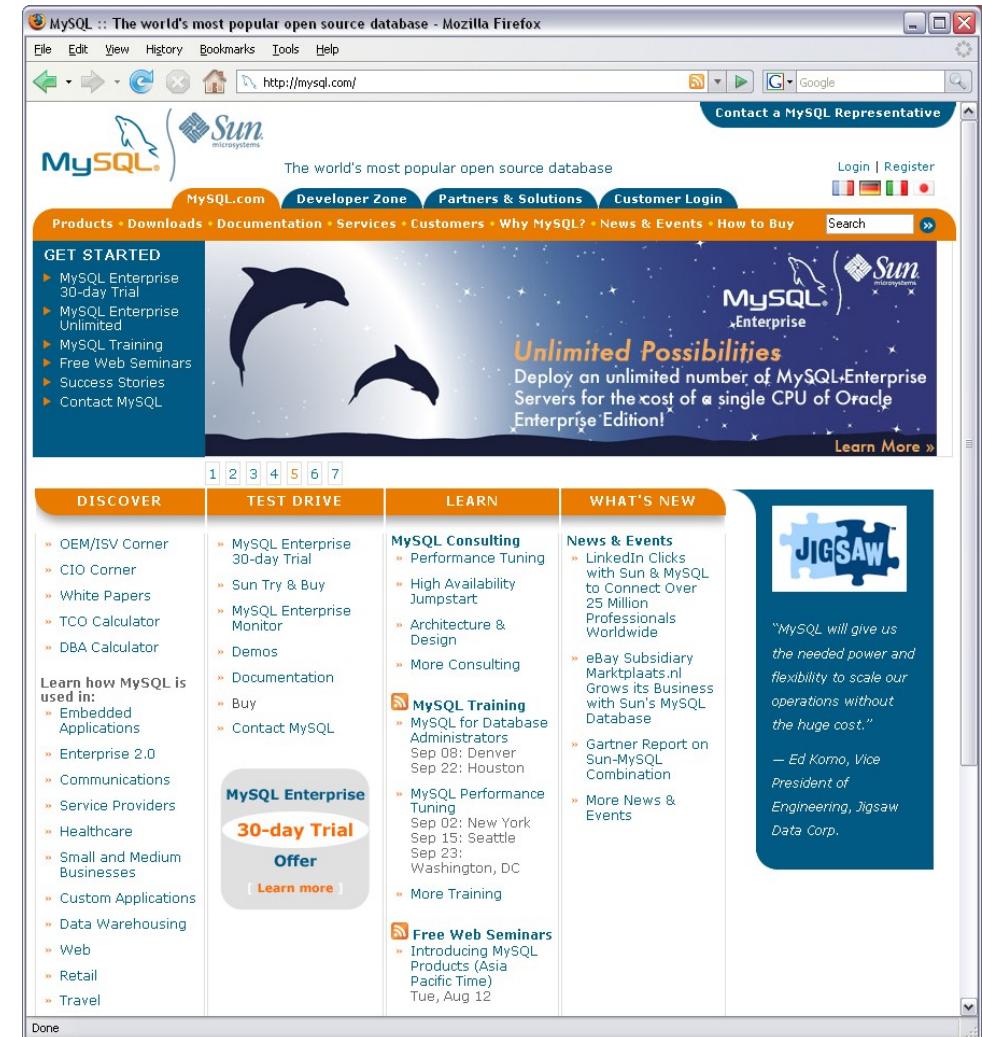
DBA

Virtual Classroom Classes



MySQL Website

- <http://www.mysql.com/>



MySQL :: The world's most popular open source database - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://mysql.com/ Contact a MySQL Representative

MySQL.com Developer Zone Partners & Solutions Customer Login

Products Downloads Documentation Services Customers Why MySQL? News & Events How to Buy Search

GET STARTED

- MySQL Enterprise 30-day Trial
- MySQL Enterprise Unlimited
- MySQL Training
- Free Web Seminars
- Success Stories
- Contact MySQL

Unlimited Possibilities
Deploy an unlimited number of MySQL Enterprise Servers for the cost of a single CPU of Oracle Enterprise Edition!

DISCOVER

- OEM/ISV Corner
- CIO Corner
- White Papers
- TCO Calculator
- DBA Calculator
- Learn how MySQL is used in:
- Embedded Applications
- Enterprise 2.0
- Communications
- Service Providers
- Healthcare
- Small and Medium Businesses
- Custom Applications
- Data Warehousing
- Web
- Retail
- Travel

TEST DRIVE

- MySQL Enterprise 30-day Trial
- Sun Try & Buy
- MySQL Enterprise Monitor
- Demos
- Documentation
- Buy
- Contact MySQL

MySQL Enterprise 30-day Trial Offer

LEARN

- MySQL Consulting**
- Performance Tuning
- High Availability Jumpstart
- Architecture & Design
- More Consulting
- MySQL Training**
- MySQL for Database Administrators
- Sep 08: Denver
- Sep 22: Houston
- MySQL Performance Tuning
- Sep 02: New York
- Sep 15: Seattle
- Sep 23: Washington, DC
- More Training
- Free Web Seminars**
- Introducing MySQL Products (Asia Pacific Time)
- Tue, Aug 12

WHAT'S NEW

- News & Events
- LinkedIn Clicks with Sun & MySQL to Connect Over 25 Million Professionals Worldwide
- eBay Subsidiary Marktplaats.nl Grows its Business with Sun's MySQL Database
- Gartner Report on Sun-MySQL Combination
- More News & Events

JIGSAW

"MySQL will give us the needed power and flexibility to scale our operations without the huge cost."

— Ed Komo, Vice President of Engineering, Jigsaw Data Corp.

MySQL Community Web Page (1/2)

- Developer Zone
- <http://dev.mysql.com/>



MySQL Community Web Page (2/2)

- Current product/service promotions
- Get Started with MySQL
- Developing with...
- MySQL Librarian
- MySQL Server Community Edition
- New Releases
- Software Previews
- What's New
- MySQL Training
- MySQL Quickpoll
- Stay Connected
- Resources

MySQL Online Documentation

- MySQL Reference Manual
- Excerpts from the Reference Manual
- MySQL GUI Tools Manuals
- Expert Guides
- MySQL Help Tables
- Example Databases
- Meta Documentation
- Community Contributed Documentation
- Printed Books
- Additional Resources



Installing MySQL

- Use the MySQL website to download
 - <http://dev.mysql.com/downloads>
- Several different platforms are supported
- “Windows” used for this course



Installing ‘world’ Database

- MySQL provides three example databases
- Can be downloaded from our website
- ‘world’ database will be used for demonstration and exercises in this course



Chapter Summary

- Explain the origin and status of the MySQL product
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