

# Growing with MySQL in Malaysia



A Presentation for MAMPU/OSCC  
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# Who am I?

- Community Relations Manager, APAC
  - Distribution Relationship/Maintainer/Bug Fixer
  - Summer of Code
  - Forge dude
  - Travels the world, usually speaking about performance tuning & benchmarks
- Previously:
  - Fedora Project FESCO and PowerPC hacker
  - OpenOffice.org hacker



The world's best open source database



# A Bold Statement?

Banks

Media

Defence

Manufacturing

BioPharma

Technology

Gaming

Government

Energy

e-Commerce

Telecom

Education

Transport

Finance

Open Source Projects

Healthcare

Travel

Retail

Web 2.0

Web 1.0

Find out more at: <http://www.mysql.com/customers/>

# Our Value Proposition



Spend some...



... to save time



# Technology...

- **Stability**
  - No one likes losing data, right?
- **Performance**
- **Ease of Use**
  - Prime focus, which might have hurt is before; user features are always implemented, when requested



# Storage Engines

- MyISAM, InnoDB, ARCHIVE, Cluster (NDB), Falcon, FEDERATED, MEMORY, etc.
- SolidDB, InfoBright (archiving), PBXT (transactional blobs), Nitro (data warehousing)
- Memcache, http, Amazon S3, and a lot more with the 5.1 pluggable storage architecture



# Ubiquity

- 11 million
- PHP, Perl, Python, Ruby, Java, and many, many connectors
- GPL
- Many distributions
  - Linux/FreeBSD/Mac OS X
  - XAMPP





# What is Enterprise?

- Its a binary
  - One release every month (a Monthly Rapid Update – MRU) and one quarterly release (a Quarterly Service Pack – QSP)
- It is support
  - 24/7 support, with a maximum of 30 minutes response time
- It is consulting
- It *could be* a site-wide license
- It is Enterprise Monitor

# Enterprise Monitor



Results Close Event Details Advanced

**CRITICAL Alert - Table Scans Excessive** (v 1.8 \*)

**Server**  
BoiPAV:3306

**Time**  
Sep 21, 2007 8:08:11 AM (23 hours, 44 minutes ago)

**Status**  
Open

**Advice**  
Turn on the Slow Query Log, and use the **--log-queries-not-using-indexes** option to log all statements using a full table scan, and then monitor this log file. Statements that are logged there are candidates for tuning. Once you have found tuning candidates, use the EXPLAIN statement on the queries to see which tables should have indexes added to them.

**Recommended Action**  
None specified.

**Notifications**  
No notifications set

Results Close Event Details Advanced

**CRITICAL Alert - Table Scans Excessive** (v 1.8 \*)

**Server**  
BoiPAV:3306

**Time**  
Sep 21, 2007 8:08:11 AM (23 hours, 44 minutes ago)

**Advisor**  
Heat Chart

**Problem Description**  
The target server does not appear to be using indexes efficiently. The values of Handler\_read\_rnd\_next and Handler\_read\_rnd together - which reflect the number of rows read via full table scans - are high compared to the sum of Handler variables which denote all row accesses - such as Handler\_read\_key, Handler\_read\_next etc. You should examine your tables and queries for proper use of indexes.

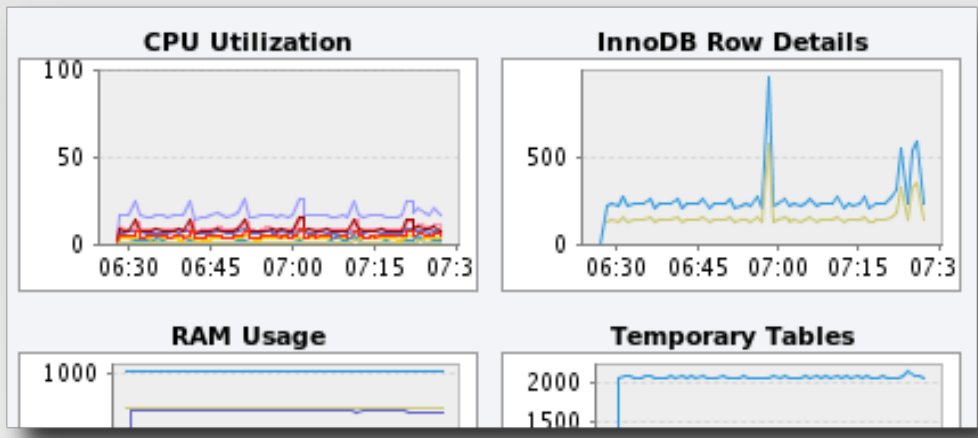
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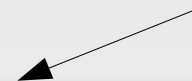
**Links and Further Reading**  
[MySQL Manual: How MySQL Uses Indexes](#)  
[MySQL Manual: The Slow Query Log](#)  
[MySQL Manual: EXPLAIN Syntax](#)



# Enterprise Monitor



The new Replication Monitor



MySQL Enterprise Dashboard

Refresh:  Help Log Out

Monitor Advisors Events Graphs **Replication** Settings

Replication Monitoring

Servers	Type	Slave IO	Slave SQL	Time Behind	Binlog	Binlog Pos	Master Binlog	Master Binlog Pos	Last Error
Replication 1 (3)	TREE	Running	Running						<a href="#">rename group</a>
Boi12:3306	master				mysql-bin.000019	102			
BoiPAV:3306	master/slave	Running	Running	00:00:00	mysql-bin.000193	98	mysql-bin.000019	102	
Boise_XP:3308	slave	Running	Running	00:00:00			mysql-bin.000193	98	

MySQL Enterprise © 2005-2007 MySQL AB. All rights reserved. [Enterprise Software](#) | [Update Service](#) | [Knowledge Base](#) | [Technical Support](#) | [About](#) Logged in as "admin" (Sep 22, 2007 8:18:43 AM)  
Monitoring 7 instances on 4 hosts (46 hosts remaining). Subscription is up-to-date. More info....



# Some government offerings

- In Malaysia...
  - There are over a 100 government related servers running some form of a LAMP stack
  - Bytecraft?
  - JKR is a good example
  - The “L” is a bit dated at Red Hat 9 (as is the “M” and obviously “A” and “P”)

# Some recent government offerings



- Swedish National Police
- NASA / NASA JPL
  - Network of servers, connecting to the 12 field stations
  - Handles contracts to the value of \$500,000 each
  - 300,000 hits/month average
  - Moved from Oracle to MySQL
  - Harnesses Connector/ODBC
  - NASA Mars Rover, alongside Java via Connector/J

# Some recent government offerings



- US Census Bureau
  - Harness data (from over 105 million households), and also, shares the data
  - Perl, Apache, Linux, PHP, and MySQL
  - <http://www.fedstats.gov/> - FedStats
  - <http://www.fedstats.gov/qf/> - MapStats
    - over 70,000 records, aggregates data from sources outside the Federal Census Bureau
  - Generally over 120,000 page views a day
- Read:
  - <http://www.mysql.com/why-mysql/white-papers/government.php>



# What about in Asia?

- We are sparser on case studies in the region
- We are working on growing this
- Could *you* be the *next* case study?

## Partial List of Government Offices Using MySQL

ADEME  
Australian Sports Commission  
Brisbane City Council  
City of New York  
CNES (Centre National d'Etudes Spatiales)  
CNRS (Centre National de la Recherche Scientifique)  
Department of Defense  
Department of Homeland Security  
Deutsch Post  
Government Open Code Collaborative (GOCC)  
IRSN (Institut de Radioprotection et de Surete Nucleaire)  
NASA  
NASA Jet Propulsion Lab (JPL)  
RATP  
State of Illinois  
State of Michigan  
State of Minnesota  
State of New York  
State of Parana  
State of Rhode Island  
US Census Bureau



# MySQL Talent in Malaysia

- hSenid is *your* focal point
  - Experienced
  - Cluster knowledge
  - MSC status
- MyOSS meetups are handy, once-monthly
- MySQL Certified DBAs





# Photo Credits

- Creative Commons license
  - <http://www.flickr.com/photos/nguyendai/410267949/>
  - <http://www.flickr.com/photos/lwr/103199569/>



# Thanks! Questions?

E-mail me:

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Catch me on IRC, at #mysql-dev:  
ccharles