

Fourth Annual



MySQL®

Users Conference 2006



DISCOVER • CONNECT • SUCCEED

Embedding MySQL

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Presented by



O'REILLY

Embedding MySQL

- What does it mean to embed MySQL?
 - Server Embedding
 - Deep Embedding (libmysqld)
 - Platform Embedding

LeapFrog LeapTrack

- Chose MySQL for cross-platform support
 - had been using different proprietary databases for their Mac OS X and Microsoft Windows versions

Adobe Bridge

- Part of the Adobe Creative Suite, used for managing assets
- Uses libmysqld
- Cross-platform

Sandstorm NetIntercept

- 2U/4U rackmount systems
- Completely parses up to 40 Mb/sec sustained average data rate
- Only access to MySQL database is through product interface

Footprint

- Code: Less than 2MB
- Disk: Depends on data
- Memory: Depends on tuning, but at least
...

Security

- Platform Embedding: Simple
- Deep Embedding: Tricky
- Server Embedding: Hard

libmysqld: just like libmysql

- You just need to make sure to call:
 - `mysql_library_init(int argc, char *argv, char *groups)`
 - `mysql_library_end()`

Connection options

- `mysql_options()`
 - `MYSQL_OPT_USE_REMOTE_CONNECTION`
 - `MYSQL_OPT_USE_EMBEDDED_CONNECTION`
 - `MYSQL_OPT_GUESS_CONNECTION`
 - `MYSQL_SET_CLIENT_IP`

Limitations

- Access control not included by default (but can be enabled)
- No replication or binary logging
- No incoming external connections

Problems

- libmysqld requires extra files (like `errmsg.sys`)
- Needs to write multiple files into a `datadir`, no single-file-tablespace (yet)
- Currently doesn't work on 5.1 (may just be minor issues)
- Fairly heavyweight

Connector/MXJ

- Platforms: Microsoft Windows (x86), Sun Solaris (Sparc), Linux (x86)
- Four ways to use:
 - Plain-old Java Object (POJO)
 - SocketFactory
 - JMX MBean
 - JDBC

Other Talks

- “Using Embedded MySQL as a High Performance Alternative to Traditional Filesystems” by George Schlossnagle, Wednesday at 5:20pm

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