MySQL and Fedora:
A Developer's Overview

Colin Charles

Community Engineer

colin@mysql.com

Agenda

- What's in MySQL 5.x
- Fitting in with the Fedora Community
- Differences in packaging
- Contributing to the OSS movement
- MySQL and India
- Resources
- Q&A?

How to collect a lot of e-mail aliases

- Coolest job ever?
  - Contributing to community projects is my job
  - Playing with applications as long as they use a database
    - Converting them to use *"the world's most popular open source database"*
- Working with distributions
  - Make sure the latest MySQL is shipped
  - Fix bugs, packaging issues, install support
- Fedora person (all around)
  - FESCO, Fedora/PPC, FNU, etc.
- OpenOffice.org, and one-time GNOME contributor

What's cool in MySQL 5?

- Fedora Core 5 (testing now) ships it
- New features:
  - Stored Procedures: Portable sub-programs stored within the DB
  - Views: Virtual table composed as a result of a query
  - Triggers: ANSI standard; check data and trigger on something, change INSERT/DELETE/UPDATE
- New features (5.1):
  - Partitioning: Distribute portions of tables across filesystem via rules
  - Event scheduling: Like cron, but in a DB

Where we fit in with the Fedora Community

- Just a package out of 1,500
  - (okay, really 13/1795)
- Want to forge better relationships
  - If you're a LAMP user, on Fedora, it should all "just work"
- Ship more Extras packages that rely on MySQL in FC
  - These could be our tools (Query Browser, Adminstrator)
  - Could be other apps (mytop, Gforge, SequioaERP)
  - Working out "Alternatives", like the NDB cluster, is the hard part
- Fix bugs with the package maintainer

How Red Hat and MySQL package differently

- RPMs are both provided at dev.mysql.com or within Fedora
- For the longest time, Fedora only shipped MySQL 3.23
  - There were licensing misconceptions with MySQL's FLOSS exception
  - A lot of applications built against 3.23 client libraries
- #include <asm/atomic.h>
  - Depends on kernel headers to build
    - sparc/sparc64/ppc64 don't enable atomic_* functions as inlines
    - i386: kernel not compiled for SMP -> compiled code will not be SMP-safe (omits lock prefix before instruction)

How Red Hat and MySQL package differently II

- No access to the extra storage engines:
  - NDB Cluster
  - ARCHIVE (large data store, no indexes, small footprint)
  - CSV
  - BLACKHOLE
  - FEDERATED (stores data in remote databases; MySQL specific)
- Get the -max package to satisfy these requirements
- mysql-shared-standard required for upgrades

Some Core/MySQL statistics

- MySQL versions in various Cores:
  - Core 1&2: 3.23.58 (rebuilt in Core 3)
  - Core 4: 4.1.11
  - Core 5: 5.0.18
- In FC-4, packages that depend on the 3.23 client libraries:
  - mysqlclient10-devel, MyODBC, libdbi-dbd-mysql
- FC-5 ships the 3.23 client libraries, but nothing else depends on it (besides its -devel package)
  - mysqlclient14 (4.1.14) is provided

How you can contribute to the OSS movement

- With Fedora, you have Extras
  - package maintenance, documentation, translation
  - ...or contribute to a package within Fedora, with upstream
- MySQL has many entry points
- Translation of documentation/applications
  - Get access to translation repository
  - In locale directory, find how_to_translate.txt
  - Sign Translation Agreement, granting MySQL AB all exclusive rights to translation
  - Requires: Love for your language/dialect, and proficient English

How you can contribute to the OSS movement II

- **Conversion of applications**
  - Plenty of applications out there use another database
  - Make them run on MySQL
  - Requires: knowledge of SQL, working knowledge of application's language DB query methods
- **MySQL code-base**
  - BitKeeper is still used for code
    - Sane build scripts exist
    - http://dev.mysql.com/doc/refman/5.1/en/installing-source-tree.html
  - Requires: knowledge of various bits used in MySQL
- **Work on the GUI tools**
- **Work on the embedded version of MySQL**

How you can contribute to the OSS movement III

- Create a Fedora-based distribution on the fly!
    - Provide a Python-based command line tool possibly
    - With a PHP/Python web-based front-end
    - A MySQL back-end
    - Contact Ramakrishna Reddy (ramkrsna@gmail.com)
        - Has 2 students working on it already
    - Plans to once ready, get it pushed upstream
- Assist in Fedora Legacy
    - When MySQL makes a new release...

MySQL and India

- What do **YOU** want?
- Books?
- Training?
- Certification?
- More job opportunities?
- MySQL User Groups

Resources

- We have mailing lists
  - http://lists.mysql.com/
  - mysql-list is very high traffic, but is a great place to learn/contribute
  - Internals list if you're into the codebase
- We have forums
  - http://forums.mysql.com/
  - These come with RSS feeds!
- http://dev.mysql.com/ is a great resource
- The manual is excellent!

Thanks!

Colin Charles

Community Engineer

colin@{mysql.com,fedoraproject.org}