How to Market MySQL to Your Manager

By Ronald Bradford, Independent Consultant

WHY CONSIDER MYSQL?

Now part of the Oracle family of database server products, MySQL (www.oracle.com/mysql) is a widely used open source RDBMS. MySQL is very popular in the Web 2.0 and Internet startup space with many popular Web sites using MySQL for their primary data storage.

If you have used the Internet today you would have visited a Web site that runs MySQL. Facebook, Twitter, Wikipedia, Craiglist, Yahoo, NY Times, CNN, Tech Crunch, even Google Adwords and Adsense (https://mysql.com/customers/view/?id=555) are just a few of the most popular Web sites that run on MySQL.

The popularity of MySQL can be attributed to two primary factors. First, MySQL is available on most operating systems and is included by default on many Linux distributions or easily installed via the respective distributions package management. Second, MySQL is an integral component in the LAMP software stack (http://en.wikipedia.org/wiki/LAMP_%28software_bundle%29) which consists of Linux, Apache, MySQL, and PHP/Perl/Python. LAMP is used for many open source software products.

The MySQL ecosystem is a diverse and vibrant community with customers, partners and consultants, contributors, and end users.

ABOUT MYSQL

MySQL was founded in 1995 by Michael "Monty" Widenius, David Axmark, and Allan Larsson. Available under the GPL v2 license, MySQL can be freely downloaded, used, and modified. MySQL also supports other licensing options for OEM and commercial use. In February 2008, MySQL Inc was acquired by Sun Microsystems and subsequently Sun was acquired by Oracle Corporation in January 2010.

The current production version is MySQL 5.1. Many organizations are still running the previous version of MySQL 5.0. Earlier versions that are still found with a small number of installations include the versions 4.1, 4.0, and 3.23.

A key difference between open source software and commercial software is the openness. New MySQL releases have included alpha, beta, and release candidate stages before general availability. The list of current and past bugs are available online, and the worklog of many new features are also available for review and customer comment.

[Image of David Axmark, one of MySQL founders, with Larry's yacht. Used with permission.]

COMMERCIAL SUPPORT

Oracle provides MySQL Enterprise, a commercial subscription version of MySQL that includes 24x7 support, quarterly service packs, MySQL Enterprise Manager and Query Analyzer, and additional online knowledge base and reference material. Commencing in the near future, MySQL Enterprise will also include the InnoDB online backup solution.

Oracle University provides various training and education programs for MySQL DBA's and developers.

The MySQL ecosystem includes a number of companies that have been founded by previous MySQL Inc employees that now provide a range of services including support, training, consulting, and custom software development. These companies include Percona, Monty Program AB, 42SQL, From Dual, and most recently, Sky SQL. Depending on your needs and requirements one of these service providers may be a viable alternative to consider. Dedicated remote database administration providers that support Oracle, MySQL, and other RDBMS products include Blue Gecko and Pythian.

THE FUTURE OF MYSQL

It is unclear exactly what Oracle will do for development of new features and possible integration with the Oracle stack. In December 2009, Oracle Corporation made a ten-point commitment to the EU regarding an ongoing commitment for MySQL (http://www.oracle.com/us/corporate/press/042364). Chief corporate architect Edward Screven most recently announcement a commitment to improving features, performance, and quality, and to begin integration of MySQL with Oracle Secure Backup and Oracle AuditVault (http://www.oracle.com/technology/oramag/oracle/10-jul/o40interview.html).

Prior to the Sun acquisition, Oracle Corporation acquired Innobase Oy in 2005, the company that provides the de-facto

MySQL transactional storage engine InnoDB (www.innodb.com). Lead by Ken Jacobs, former VP of product strategy at Oracle, the InnoDB engine continued to be developed and incorporated with MySQL. This showed a great commitment by Ken and his team to supporting the MySQL open source community.

Oracle currently contributes to open source in other areas including the Linux kernel, Apache Server, and the Eclipse IDE. With the Sun acquisition, additional open source products with MySQL now also include Java, Virtual Box, Net Beans, and Open Solaris.

The Oracle user groups have embraced the MySQL community with a dedicated MySQL track at the recent ODTUG Kaleidoscope 2010 conference held in Washington, D.C. Oracle OpenWorld 2010 will include four tracks on MySQL Sunday. The DOAG and UKOUG conferences this year will include MySQL tracks, and in 2011, Collaborate and Kaleidoscope conferences will contain multiple MySQL tracks.

EASE OF USE

One of the significant benefits of MySQL is its ease of use. Generally already installed on most Linux systems, MySQL can be installed by a single command if not yet present. On Oracle Unbreakable Linux 5.4 you can use the following commands to check for MySQL, configure your yum repository and install MySQL.

```
# Check if already installed
$ rpm -qa | grep -i mysql
# Configure yum repository on new server
$ su -
$ cd /tmp
$ wget http://public-yum.oracle.com/public-yum-el5.repo
$ sed -e "s/enabled=0/enabled=1/" public-yum-el5.repo >
/etc/
yum.repos.d/public-yum-el5.repo
# Install MySQL
$ yum install -y mysql-server mysql
# Start and test MySQL Instance
$ /etc/init.d/mysqld start
$ mysql -uroot -e "SELECT VERSION"
```

For additional instructions on installation see http://rb42.com/oel-install-mysql.

You can find more information about the Oracle public yum repository at http://publicyum.oracle.com/. You will also note that the version installed is 5.0. The current GA version of MySQL is 5.1, however Red Hat is notorious for taking time to update repositories more regularly. You can always use more current rpm files available at the MySQL downloads page. [http://www.mysql.com/downloads/]

MySQL has a very small disk footprint (< 200M) and can easily operate on systems with 1GB of RAM. With supported connectors for Java, C, C++, .NET, PHP, and Python and additional community drivers for popular technologies including Perl, PHP, and Ruby, MySQL can be used with any modern programming language.

Installing a LAMP stack can be performed with:

```
$ yum install -y httpd php php-mysql
$ /etc/init.d/httpd start
```

To test and confirm Apache Httpd and PHP, we can use the CLI browser lynx:

```
$ yum install -y lynx
$ echo "<? phpinfo() ?>" > /var/www/html/phpinfo.php
$ lynx http://localhost/phpinfo.php
```

For additional detailed instructions see http://rb42.com/oel-install-lamp.

GETTING STARTED WITH MYSQL

The best use of MySQL is to start with a purpose to ensure the successful deployment of the technology. Examples of the simplest and practical implementations for an organization of any size is a Blog, a Wiki, and a CMS.

The Company Blog

A company blog can be easily configured in under ten minutes using Wordpress (www.wordpress.org), a popular open source product that runs a reported twelve plus million blogs including those found at CNN, NY Times, Wall Street Journal (WSJ), ZDNet, MTV, People Magazine, Playstation, and eBay.

A company blog allows for the dissemination of information to your user base as well as enabling a means of user feedback via comments. Installation is possible with the following commands:

```
# Wordpress Installation
su -
cd /tmp
wget http://wordpress.org/latest.tar.gz
cd /var/www/html
tar xfz /tmp/latest.tar.gz
mv wordpress blog
# Wordpress Configuration
cd blog
sed -e "s/database_name_here/blog/;s/username_here/
blog_user/;s/
password_here/sakila/" wp-config-sample.php > wp-
config.php
mysql -uroot -p -e "CREATE SCHEMA blog"
mysql -uroot -p -e "CREATE USER blog_user @localhost
IDENTIFIED BY 'sakila'"
mysql -uroot -p -e "GRANT SELECT,INSERT,UPDATE,DEL
ETE,CREATE on blog.* TO
blog_user@localhost"
```

Point your browser to http://localhost/blog, enter a Title, e-mail address, and Password, click Save and your Wordpress Blog is installed and operational. For additional instructions see http://rb42.com/oel-install-wordpress.

User Supported Documentation

An internal wiki is an ideal means of maintaining internal documentation enabling group collaboration. There are many different open source wiki products available; Mediawiki

(www.mediawiki.org) is the software that powers the popular www.wikipedia.org and is a good product to start using.

For detailed instructions to install Mediawiki see http://rb42.com/oel-install-mediawiki.

Content Management

The popular content management system (CMS) Drupal (www.drupal.org) powers many popular Web sites including the White House (www.whitehouse.gov), The Economist (www.economist.com), South Africa FIFA 2010 World Cup site (www.sa2010.gov.za), Department of Commerce (www.commerce.gov), and many popular artists from Sony Music.

This product can be used to provide a portal of news, information, events, and user-generated content or to support a user-driven community of information, forums, and user feedback.

For detailed instructions to install Drupal see http://rb42.com/oel-install-drupal.

MYSQL SHORTCOMINGS

MySQL is not without some shortcomings; however, knowing that product options do exist can help to satisfy any management needs or concerns.

Perhaps the greatest problem is the lack of a single unbreakable backup solution. There are various ways to create a suitable and reliable backup and recovery process; however, this depends on a number of different variables including the MySQL topology and storage engines used. Edward Screven in his opening keynote at the 2010 MySQL User's conference stated that Oracle was committed to ensuring backup was a primary objective for improvement with a focus to incorporate MySQL into Oracle Secure Backup and Audit Vault.

MySQL as a RDBMS includes most features you would expect and demand including data integrity, transactions, ACID, point-in-time recovery, etc; however, many of these options are not enabled by default. My recent Kaleidoscope presentation, "MySQL Idiosyncrasies that BITE," highlighted a number of these. Read more at http://rb42.com/idiosyncrasies.

Appropriate education for learning, using, and mastering MySQL are important considerations for introducing MySQL into your environment and an important factor for a successful deployment. At ODTUG Kaleidoscope 2010, an entire track was dedicated to MySQL and covered all the essential bases for education in the features of MySQL for developers and DBA's.

DEVELOPER TOOLS & RESOURCES

There are a wealth of free tools that can be used with MySQL for development, administration, and monitoring. Popular tools in addition to a Text Editor and command line tools include:

- MySQL Workbench - a GUI tool for database design and data management.
- Toad for MySQL and SQLyog are GUI developer tools. Oracle SQL Developer can also be used
- phpmyadmin - the defacto LAMP product for administering your MySQL environment.

- Cacti + MySQL Cacti Templates - Integrated system and MySQL monitoring

Many other products also exist including a number of commercial products.

The MySQL community is a small but vibrant group that are generally very willing to help regardless of your skill level. Some key links you should know include:

- http://planet.mysql.com - MySQL Blog Aggregrator
- http://dev.mysql.com - MySQL developer zone and MySQL librarian
- http://forums.mysql.com/ - MySQL Forums
- http://forge.mysql.com - MySQL projects, tools, and code snippets
- http://bugs.mysql.com - MySQL Bugs Database
- IRC #mysql on http://freenode.net
- http://www.technocation.org/ - A large online resource of presentations, videos, and podcasts maintained by fellow ACE Director Sheeri K. Cabral

CONCLUSION

There is no reason not to consider MySQL in your enterprise database offerings. Choosing the right project to start with and designing and implementing correctly is key for a successful implementation. Integration of MySQL into existing monitoring, administration, data retention, and recovery procedures can take time to perfect. Ensuring appropriate training and education of resources is an important factor for consideration.

The next event that will contain relevant content is the MySQL Sunday community talks at Oracle OpenWorld 2010. This will include four tracks of MySQL presentations for the attendee.

Oracle Development Tools *Member*

About The Author

Ronald Bradford provides independent MySQL consulting specializing in architecture, performance tuning, and education. Based in New York, NY, his clients range from startups to Fortune 500 companies and span USA, Canada, Europe, and Asia.

As a recognized speaker and presenter and key community contributor, Ronald is one of the first three Oracle ACE Directors in MySQL. Most recently he was program chair for the MySQL track at ODTUG Kaleidoscope 2010. He is also the co-author of "Expert PHP and MySQL" [http://expertphpandmysql.com].

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