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MySQL migration and risk management

Database expert Ronald Bradford on the pros and cons of migrating from Oracle to MySQL

by [Mac Slocum](#) | [@macslocum](#) | [+Mac Slocum](#) | March 5, 2010

[Oracle's acquisition of Sun](#) has opened up all sorts of questions: Will MySQL get the support it needs? What will become of the MySQL community? Where should database administrators put their efforts and resources?

[Ronald Bradford](#) can answer that last question. Bradford, an [RDBMS](#) expert and a speaker at the upcoming [MySQL Conference and Expo](#), has been guiding DBAs through key aspects of MySQL integration for years. In the following Q&A, he discusses the pros and cons of migrating from Oracle to MySQL (hint: it's not just about cost savings). He also weighs in on the future of MySQL and its community.

Jumping from Oracle to MySQL

Mac Slocum: What are the upsides to migrating from Oracle to MySQL? Is cost the major factor?

Ronald Bradford: The Oracle license cost is generally the most important factor for organizations considering migrations. Also, integration with open source [LAMP](#) products that provide many features you see today, including project management, bug tracking, wikis, blogs, and customer relationship management, are better served when all systems can communicate with the underlying data storage in MySQL.



Newer and cheaper multi-core hardware, and a correct scale-out architecture, manages risk better than a single, large, scale-up instance of your data. Failure of 1-10 percent of your user data is far better than 100 percent failure.

MS: What are the major issues with Oracle to MySQL migration?

RB: Adequate education and skills development is the most significant and most under-budgeted cost in migration. While the cost of licensing and subscriptions is generally less for non-Oracle solutions, MySQL is not Oracle. Most organizations underestimate the time needed for staff to become proficient in a new skill, especially when they're required to maintain existing systems.

The second factor is staff pushing back against MySQL. For example, management at a top 20 website I was involved with made the decision to replace Oracle with MySQL. The technical resources, including system architects and senior DBAs, were not in agreement and they sometimes actively fought against the implementation of MySQL.

The third issue is monitoring. MySQL does not have the level of in-depth instrumentation it should. While it's integrated into existing open source monitoring products, MySQL is not always well supported by production network operations center systems.

For these reasons, slow integration with less critical systems is a successful integration model. This enables time for a comfortable and successful transition and it creates confidence moving forward.

MySQL's future

MS: What do you think will happen to MySQL once dust settles from Oracle's acquisition of Sun?

RB: Oracle has made a [written commitment](#) to invest in MySQL at the same rate as Sun for the next three years. Given the vast experience and R&D budget Oracle has given its product line, I hope more is invested in MySQL.



In the year following MySQL's first acquisition by Sun, they failed to produce advances the community would have

liked. Many in the community were disappointed by the stealth release of 5.4. I suspect it will take some time for Oracle resources, processes and procedures to integrate with the existing MySQL engineering lifecycle, and it will take time before we see any future work.

I would like to see two areas of MySQL deficiency addressed: a totally integrated and online backup solution, and better instrumentation.

MS: Will the MySQL developers under Oracle build stronger bonds with users?

RB: Open-source culture is unique in comparison to commercial, closed-source products. Developers who work for MySQL now will continue to be available to alumni and the community, and I suspect they will continue to write, blog and actively present.

While there has already been a small exodus of staff from the Oracle acquisition, any restrictions between staff and open source developers will greatly hurt the community. On the flip side, it will be difficult for Oracle developers who start using and contributing to MySQL development to be more open and responsive. It's unfamiliar ground.

MS: Will work by [Monty Widenius](#) and others bring into being a larger after-market of MySQL extensions and patches?

RB: The after-market movement started many years ago when MySQL executives lost perspective on the community and focused on commercial viability. This after-market will continue to flourish. I agree with a fellow community member who recently stated that the trademarked version of MySQL will be just one variant of the overall MySQL product. There are individual products that are as good if not better than the official MySQL version. What's lacking are commercial support options and documentation.

MS: Will the varied projects that fall under [NoSQL](#) take market share from relational databases? Or will they grow in parallel?

RB: MySQL has continued to grow in the database market. Oracle and other products have also grown. That indicates a general increase in demand regardless of the specific product. I see NoSQL adding value and options to an increasing marketplace.

The NoSQL options have some great benefits, and in any emerging topology it's important to architect a solution that maximizes the strengths and minimizes the weaknesses of the products in use. Persistent or non persistent key-value stores, including [Memcached](#), [Tokyo Tyrant](#), [Redis](#) and [Cassandra](#), are ideally suited for some functionality. Unstructured data being managed by [MongoDB](#) or [CouchDB](#) will be ideal in other situations.

Another key area is that of free text searching. Products such as [Sphinx](#), [Lucene](#) and [Solr](#) are critical to a successful website or application.

The recent news that [Twitter is moving to Cassandra](#) highlights that products like these can deliver in highly available and scalable situations. It all depends on the right product for the given business requirements.

MS: You'll be speaking at the [MySQL Conference and Expo](#) in April. What are you hoping attendees will take away from your "MySQLCamp for Oracle DBAs" tutorials?

RB: It will be difficult in two sessions to provide great depth for Oracle DBAs. However, attendees will get the wealth of my 20 years of commercial experience in Oracle, MySQL and other RDBMS products. They'll also get a methodology for how to approach MySQL from a different skills background. Attendees will be able to identify the clear strengths and weaknesses of MySQL, and I'll provide information on common pitfalls.

If I was to give a single statement that also encompasses some important content, it's this: Don't Assume. MySQL is not Oracle. Obvious mistakes in terminology, syntax and structure can be significant in the performance and best practices for using MySQL.

The outline of the four talks in my MySQLCamp for the

Oracle DBA series, [two of which are being presented at the conference](#), is available on my [website](#).

Note: This interview was condensed and edited.

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