



thePlatform Migrates Media Publishing System to MySQL and Achieves 23x Performance Gain with the MySQL Query Analyzer



Media

OS: RedHat Enterprise Linux

Database: MySQL

Application Server: Jetty

Language: Java

Hardware: HP Dual-Core Intel Xeon Servers

“We migrated major applications to MySQL to meet thePlatform’s rapid business growth. Plus, we saved over \$1 million dollars in database licensing and maintenance costs.”

Phil Hildebrand

Database Manager, thePlatform

thePlatform Overview

thePlatform is a leading, fast-growing video management and publishing company for broadband, mobile and TV. Established in 2000, thePlatform’s Media Publishing System™(MPS) enables media companies like Time Warner Cable to manage, monetize and syndicate their billions of video views more effectively. Feeling confident that the MPS solution can reliably deliver and manage media content, thePlatform's customers can then focus more on business-critical applications and revenue-generating activities such as advertisement. Since its debut, thePlatform quickly grew revenue, as well as momentum, in the media sector, and has successfully gained well-known customers, including Comcast, NBC-Universal, Associated Press, BBC Global News, HIT Entertainment and CNBC. For its best-in-class technology and top tier customer base, Comcast Interactive Media acquired thePlatform in 2006, which now operates as a stand-alone subsidiary¹.

The on-line video market has grown extremely fast and is expected to grow tenfold in five years. By December 2008, online video viewing has reached 14.3 billion videos per month in the US, representing 13% month-over-month growth and an exceptional 41% year-over-year increase. According to comScore, thePlatform's clients had a combined total of more than 440 million video views in December of 2008. When compared against independent US online video properties, that aggregate number would place thePlatform’s customer universe third behind leader Google/YouTube and Fox Interactive Media/MySpace, and ahead of Yahoo!, Viacom Digital and Microsoft’s various sites².

The Business Challenge

thePlatform had been using proprietary databases to store meta data for media files, such as locations of the files and the customer information, in the Media Publishing System. Since business at thePlatform has grown extremely fast, the demand for the application has increased dramatically with more customers and more end users per customer. To further scale the Media Publishing System and reduce costs, thePlatform decided to deploy a scale-out database architecture and to migrate the application to MySQL.



1 http://www.multichannel.com/article/124152-Comcast_Buys_thePlatform.php

2 http://www.broadcastingcable.com/article/173853-thePlatform_Cuts_Web_Video_Costs.php

The MySQL Solution

thePlatform decided to migrate to MySQL for the following reasons:

- **Reputation:** MySQL is renowned as an enterprise-level database to support mission-critical applications for large websites such as Google and Facebook.
- **High Performance:** thePlatform had done extensive performance tests on MySQL to make sure that MySQL could support their customers' traffic load. In the benchmark tests, MySQL with the InnoDB storage engine processed 1,500 transactions/second under normal load, and as high as 10,000 transactions/second during peak performance, with no database locking issues. Both numbers exceeded thePlatform's requirements for database performance.
- **Low TCO:** thePlatform runs its database applications on 4-CPU, dual-core Intel machines. Since the MySQL Enterprise subscription is priced on a per server basis, rather than by the number of cores or CPUs, thePlatform found it very cost-effective in terms of price/performance.

Query ID	Query Text	Execution Count	Execution Time (ms)	Status
1	SELECT * FROM table1 WHERE id = 1	1000	1000	Success
2	SELECT * FROM table2 WHERE id = 2	500	500	Success
3	SELECT * FROM table3 WHERE id = 3	250	250	Success
4	SELECT * FROM table4 WHERE id = 4	125	125	Success
5	SELECT * FROM table5 WHERE id = 5	62.5	62.5	Success

MySQL Query Analyzer provides a consolidated view of query activity and execution statistics across all your MySQL servers

MySQL Query Analyzer

It has been a challenge for thePlatform to identify performance problems efficiently with MySQL when one customer experienced longer response times than others for the same service. While the DBA team can “playback” the application load using the MySQL General Log or Slow Query Log, it was almost impossible to spot the problem queries quickly in the log file. Also, the problem query has to run long enough to be picked up by the Slow Query Log.

The MySQL Query Analyzer, with a unified panel that lists all the queries by its execution count, run time and result sets, is an ideal solution to this problem. It captures queries with a shorter execution time, provides complete information for each query, and offers various dimensions to examine the queries. With the MySQL Query Analyzer, thePlatform now has a systematic approach to gather and test the application load, and to improve service response time by finding the worst-performing queries.



“The new MySQL Query Analyzer gives us a better level of visibility into our database performance that we have never had before. Not only does it save us both time and resources, it allows us to be far better prepared when applications go live, by helping us understand exactly the demands that will be placed on the system.”

Phil Hildebrand

Database Manager, thePlatform



“The MySQL Query Analyzer helped us quickly identify critical performance issues before going into production and reduced the query time by 95% from 70 seconds to 3 seconds. We achieved the 23x performance gain in just a few minutes, rather than days.”

Phil Hildebrand

Database Manager, thePlatform

thePlatform describes the MySQL Query Analyzer as “a great tool for trouble shooting” and has successfully improved performance by orders of magnitude. In one case where thePlatform was testing the new version of a custom service API, the DBA team noticed that the response times kept increasing during the performance tests but had difficulties identifying the associated query. After obtaining the MySQL Query Analyzer, thePlatform re-ran the same test and sorted the queries by the maximum run time, and quickly found the queries that were causing performance issues.

Once the problematic query was identified, thePlatform immediately recognized a missing index. By simply adding back this missing index, the query time was decreased from 70 seconds to 3 seconds, effectively a 23x performance improvement. Since this API call is executed very frequently, other services also benefited from this fix with reduced response time.

This huge performance gain, which would have required several days of effort, only took thePlatform a few minutes to achieve with the MySQL Query Analyzer.

As a result, thePlatform can identify and fix critical performance issues before deploying new code into production, and solve problems before they're noticed by customers.

MySQL Enterprise Monitor and Advisors

thePlatform deploys a Master-Master replication topology using MySQL, and chooses the MySQL Enterprise subscription for the comprehensive replication monitoring capabilities provided by the MySQL Replication Monitor. In addition to displaying real-time replication performance for all MySQL servers, the Replication Monitor can also be customized to send out alerts based on specific needs and requirements to ensure the highest level of availability. Without the MySQL Replication Monitor, thePlatform would need to spend several weeks of full-time work developing and maintaining customized scripts to monitor its replication system.

MySQL Enterprise Advisors, which supply MySQL best practices information and alert DBAs to performance tuning opportunities, have also been very useful for thePlatform. Since they were mostly Oracle and Microsoft SQL Server DBAs, the MySQL Enterprise Advisor's security, performance and replication rules helped the DBA team to quickly get started with MySQL in the early phase of their database migration. Plus, the clear guidance for optimal MySQL server configurations saved thePlatform lots of time researching as well as on trial and error efforts.

MySQL Enterprise

Full Support & Less Risk for Your Production Database Applications

A MySQL Enterprise subscription includes the most comprehensive set of MySQL database software, services and support so your business achieves the highest levels of reliability, security and uptime.



Proactive database monitoring and advisory tools are available exclusively to MySQL Enterprise subscribers.

MySQL Enterprise includes:

- **MySQL Enterprise Server** – the most reliable, secure and up-to-date version of the world's most popular open source database
- **MySQL Enterprise Monitor** – GUI-based tools that continuously monitor your database and proactively advise you on how to implement MySQL best practices, including performance tips and security alerts
- **MySQL 24x7 Production Support** – with guaranteed response times to assist you in the development, deployment and management of your MySQL applications.

About MySQL

MySQL is the world's most popular open source database software. Many of the world's largest and fastest-growing organizations use MySQL to save time and money powering their high-volume Web sites, business-critical systems and packaged software – including industry leaders such as Yahoo!, Google, Alcatel-Lucent, YouTube and Zappos.com.

For more information about MySQL, please go to www.mysql.com/enterprise

To contact MySQL online or via telephone, please go to www.mysql.com/contact



The World's Most Popular Open Source Database