

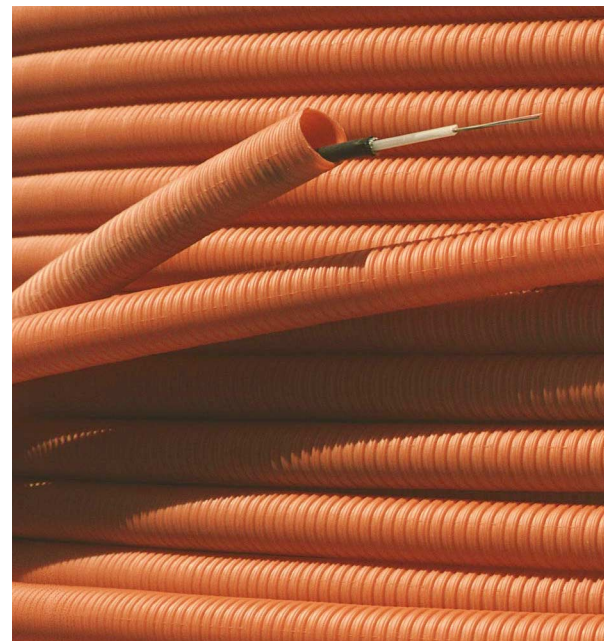


Cox Communications *Powers Massive Data Warehouse with MySQL*

Cox Communications is the fourth largest cable-television provider in the United States, serving approximately 6.3 million customers. A Fortune 500 company, Cox has built communications networks and delivered quality cable television programs since 1962. Cox is noted for its high-capacity, reliable broadband delivery network as well as the company's ability to provide superior customer service. For Cox, it's not about being the biggest; it's about being the best.

To maintain optimum performance and customer-service levels, Cox has developed a huge data warehousing application. At the heart of this business-critical system is a 2-billion row MySQL database.

Cox uses the MySQL database to manage a variety of cable modem information, maintain cable firmware, provide an interface to customer care for real-time support and expedite internal and customer trending and analysis. Additionally, the database aggregates the company's scheduled polls and mines the data for pertinent trouble-identification metrics on its RF (coaxial) plant.



"The MySQL application is central to our ability to make more informed business decisions and provide better customer care."

Mark Cotner,
Manager of Network Application
Development, Cox Communications



Size and Complexity Requires Top Performance

Given the size and complexity of the application, the MySQL database is under constant pressure to perform. On a daily basis, Cox uses MySQL to pull data from over 1.2 million cable modems. Already the database includes more than 3,600 tables and two billion rows of data. Overall, the MySQL database handles approximately four million inserts every two hours.

“No question, this qualifies as a 'heavy load' environment,” noted Mark Cotner, manager of Network Application Development at Cox. “The application runs across 27 collection servers and the database will soon be about 600GB in size.”

“Based on this level of activity, you might expect that the data-

base is busy all the time, but in fact it is almost always idle,” said Cotner. “This is a result of the speed of the MySQL database. The collection of data that occurs every two hours takes only a few minutes to complete, and the network-usage mining that happens at night takes less than three hours.”

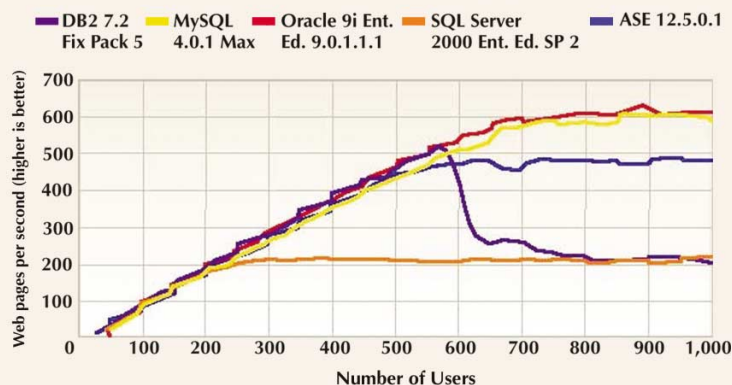
Data analysis with MySQL is fast, dealing with the latest up-to-date information. MySQL is unmatched in speed, compactness, stability, and ease of deployment. When used in a data warehousing application, MySQL provides greater operational understanding of customers purchase habits and service needs enabling more effective sales and better service.

Because of MySQL's high performance, it is ideally suited for data warehousing projects and is used to analyze and report on multi-billion row databases with millions of inserts every hour. MySQL's performance also scales to deal with large databases measuring in the hundreds of gigabytes and terabytes.

“We use MySQL's replication feature to keep four copies of the database distributed across several large systems.”

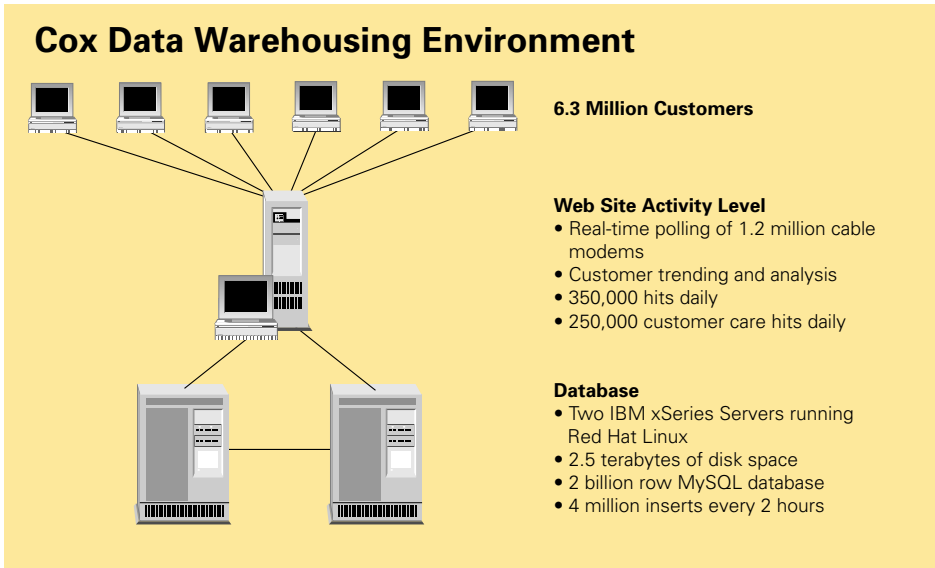
Mark Cotner,
 Manager of Network Application Development, Cox Communications

Oracle 9i and MySQL Top Throughput



Throughput is in returned Web pages per second from the application server. Number of users is number of concurrent Web clients driving the load. Response time is the time to complete the six bookstore user action sequences, weighted by frequency of each sequence in the mix. All tests were conducted on a HP NetServer LT 6000r with four 700MHz Xeon CPUs, 2GB of RAM, a Gigabit Ethernet Intel Corp. Pro/1000 F Server Adapter and 24 9.1GB Ultra3 SCSI hard drives used for database storage.

Lower Total Cost of Ownership



"In today's market, we are constantly striving to keep costs down, Hardware and software costs contribute heavily to our IT budget. Leveraging the MySQL database allows us to save money without sacrificing performance."

Mark Cotner,
Manager of Network Application
Development, Cox Communications

While MySQL has proven that it is qualified to easily handle Cox's large-scale, high-volume warehouse application, it has also enabled Cox to achieve an extremely low total cost of ownership.

Typically, MySQL reduces the Total Cost of Ownership (TCO) of database software by:

- ◆ Reducing database licensing costs by over 90%
- ◆ Cutting systems downtime by 60%
- ◆ Lowering hardware expenditure by 70%
- ◆ Reducing administration, engineering and support costs by up to 50%

Cox uses the LAMP software stack, with Linux, Apache, MySQL, PHP and Perl. The poller application is written in Perl and they also use Perl to collect data from the pollers and store it in the master MySQL database. The application has a Web-based front-end written in PHP, which enables reporting and real-time polling features.

Technical Environment

The Cox technical environment includes IBM xSeries servers running Red Hat Linux. Two Linux boxes with 2.5 terabytes of disk space in a high availability configuration serve all of their high speed Internet customer care account lookups and real-time modem polling (approximately 100, 000 hits a day). They also aggregate Cox's scheduled polls and mine that data for pertinent trouble identification metrics on its coaxial plant.

Why Industry Leaders Depend on MySQL

As an industry leader, Cox relies on the ultra-fast, highly reliable MySQL database. "Judging by its performance to this point, we are confident the MySQL database can handle even greater demands," offered Cotner. "The MySQL application is central to our ability to make more informed business decisions and provide better customer care."

MySQL has been battle proven in the market place with over four million active installations. MySQL AB stands behind the software with 7 x 24 support, training, certification, and consulting.

More and more, IT managers are using the entire enterprise Open Source software stack LAMP as a way to further improve operational efficiency.

The MySQL database is supported by MySQL AB, a second generation Open Source company founded in 1995. The company is profitable, owns and supports all its own code and offers a unique licensing approach that makes corporate purchasing easy.

About MySQL

MySQL AB develops, markets, and supports the MySQL database server, the world's most popular open source database. With over four million active installations, MySQL has quickly become the core of many high-volume, business-critical applications.

Major corporations such as Yahoo!, Lucent Technologies, Sony Pictures Digital Entertainment, Motorola, NASA, HP, Xerox and Cisco rely on the ultra-fast, highly-reliable MySQL database. MySQL is available under the free software/Open Source GNU general public license (GPL) or a non-GPL commercial license.



The World's Most Popular Open Source Database

Worldwide Offices

North America Headquarters

2510 Fairview Avenue East
Seattle, WA 98102 USA
+1-425-743-5635 P
+1-425-671-0771 F

France

+33-(0)1-43-077-099

Germany, Austria, Switzerland

+49-(0)7022-9256-30

Spain, Portugal, Latin America

+1-425-373-3434

Sweden, Denmark, Norway

+46-730-234-111

Finland

+358-(0)-9-2517-5553