



Polystar Monitors Telecom Networks Worldwide with Embedded MySQL



Telecommunications

OS: Redhat Enterprise Linux 4

Hardware: HP DL365 G1 machines (probe servers)

Database: MySQL 5.0x

“We do provide a custom SQL query browser with our Jupiter product, but due to the transparency of the system, our customers have the option to dive directly into the stored data, analysing it using their own tools”

Christer Holmberg
Chief Strategy Officer at Polystar



Polystar Overview

Polystar is a telecommunications supplier, providing service assurance and network performance monitoring solutions to the leading telecom manufacturers, operators and service providers worldwide. The global customer base includes T-Mobile, Telefonica, Telia and Telenor. Polystar's solutions provide real-time visibility into the reality of operators' network quality and their customers' experience. The products empower network owners of fixed or mobile networks, as well as for VoIP and NGN to make business-critical decisions with speed and accuracy. Polystar is the privately owned company that has been profitable every single year since it started in 1983.

The Business Challenge

In order to run telephone services smoothly, telecom operators and service suppliers need to constantly monitor and adjust their signaling networks. It's crucial to quickly find and address bottlenecks or faulty equipment on a larger scale, to track billing information and serve single customers reporting communication errors.

Information on every single phone call or data transmission, whether made by mobile phone, GPRS, VoIP or stationary equipment, is registered and saved as a detailed record (XDR), which is now stored in a MySQL table. The records allow Network operators to review and analyse single or multiple calls, while searching for reported disturbances, bottlenecks, errors, and even frauds, where hostile agents make numerous calls looking for unprotected channels to exploit.

The OSIX Monitoring Solution captures and records real-time XDR data for every single transmission made in the network and stores this information in a MySQL database. The system is installed as a cluster of pre-programmed Probe Server Nodes dimensioned to suit traffic volumes, each unit capable of continuously storing more than 1000 records per second. Large operators may deploy more than one hundred load-balanced nodes collecting and retaining data on a rolling schedule, allowing administrators to quickly pinpoint and address problems, typically up to two weeks back in time. It is also possible to use collected information for billing verification purposes. System queries have to be quick as operators regularly need to access and analyse network traffic in real time, while customers wait on the phone for support.

The Jupiter product compiles an even larger amount of XDR data for detailed, but less urgent analysis, both from technical and business perspectives. For example, an operator may investigate what type of handsets generate the most traffic in its network while experiencing the least number of disturbances and adjust marketing activities accordingly. Data, stored in the Jupiter MySQL database, often amounts to tens of terabytes.

MySQL Provides High Performance and Reliability

The MySQL Solution

Polystar was looking for a database that was easy to use and had a straightforward deployment scheme. Another important parameter was the hardware required to run the database.

“Once we tried our current supplier, we never looked back”, said Thomas Nilsson, CTO of Polystar. “Following some initial on-site training from another current supplier, we concluded that MySQL tuning was very easy and intuitive, and we can use affordable hardware to the benefit of our customers.

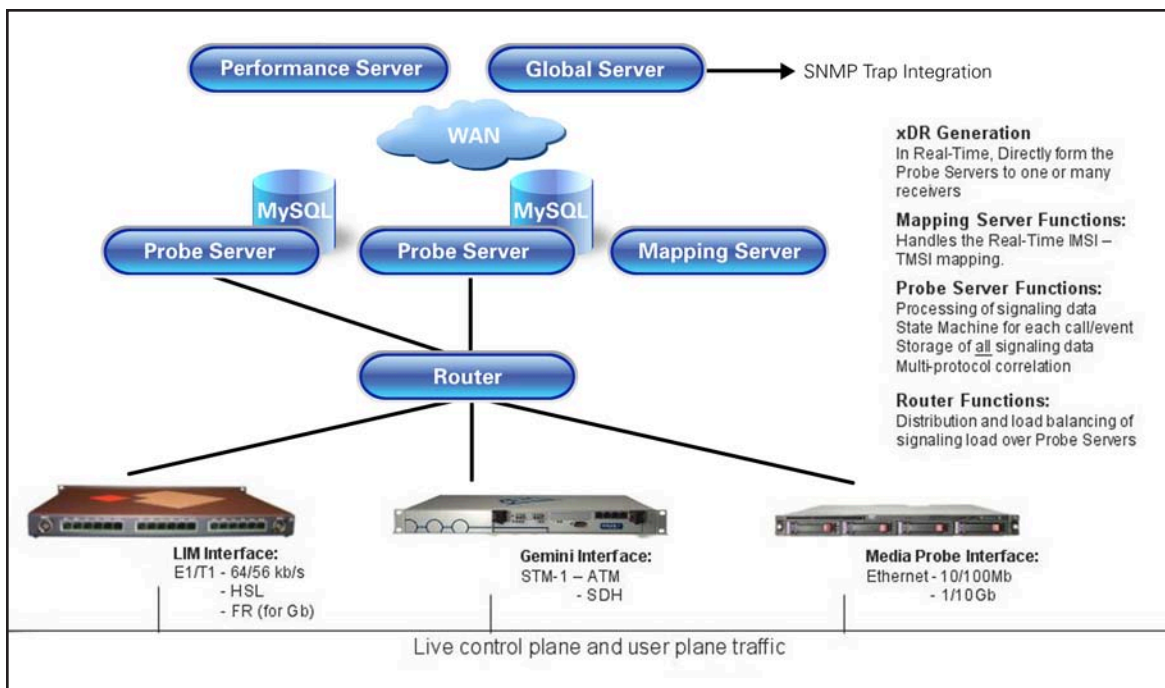
MySQL has always been technically extremely stable in our system, and the installation is simple. If and when we need help, we can then turn to Sun Microsystems's MySQL support team.”

Strategically the company has chosen an open architecture, differentiating on cost-efficiency, rather than on a complicated product infrastructure.



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CTO of Polystar



MySQL Embedded Server for OEMs, ISVs, and VARs

MySQL Embedded Server is a full-featured, zero administration database that enables ISVs and OEMs to bring their applications and solutions to market faster. MySQL's small footprint, zero administration and support for 20+ platforms gives ISVs and OEMs ultimate flexibility to ship a highly reliable SQL-compliant, transactional database with just about any software application or hardware appliance.

MySQL Embedded Server enables OEM/ISV/VARs to:

- **Reduce COGS and improve profitability** by embedding a cost-effective database without artificial license restrictions on CPU, memory, and servers
- **Bring applications to market faster** by embedding a proven database rather than building and maintaining a proprietary database in-house
- **Deliver a differentiated solution** that can capture, store and report on data with speed and granularity by embedding a full-featured, relational database
- **Win competitive comparisons** using a SQL-compliant, relational database with superior performance and reliability

- **Deliver a zero-administration solution** so that their customers don't have to hire dedicated DBA resources
- **Make reporting and analysis easy** using a cost-effective open source reporting solution like Jasper for MySQL: OEM Edition.

MySQL Embedded Server is Ideally Suited for:

Software Applications

- Network & Performance Management
- Monitoring Systems
- CRM & ERP
- Educational Software
- Email, Anti-Spam Software
- VoIP & Online Messaging
- Healthcare & Practice Management
- Biotech

Hardware Appliances

- Networking Equipment
- Routers & Traffic Controllers
- Security Appliances
- Retail Kiosks
- Point-of-Sale (POS) Systems
- Diagnostic Instruments
- Sensory Devices
- And more...

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 Embedded Server, please go to www.mysql.com/oem

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



The World's Most Popular Open Source Database