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Case Study

High Availability & Scalability with MySQL

Solution Brings Bright Smiles to Two Dental Organizations

Two dental organizations based in the U.S. needed Datavail's help with the implementation of an OLTP with high availability (HA) on MySQL database systems to support their Dental Practice Management System (PMS), using a configuration that supports high transaction throughput.

Challenges

- Issues with availability and scalability during master failover and conflicts with multi-master
- Frequent issues/latencies with replication
- MySQL performance issues on Windows was one of the biggest challenges

Solution & Implementation

- The existing MySQL setup used master-master and M-S replication with two slaves each. The customer expected more scalable solutions plus expansion with ability for a disaster recovery (DR) solution. They needed a more stable solution with the amount of data growth combined with frequent replication issues
- Datavail proposed a Galera cluster with MySQL
- Datavail's MySQL team implemented Galera (3.x) cluster with MySQL (5.7) Starting with lower environments first with functional and performance testing before moving to production cutover
- A migration was completed from MySQL on Windows to MySQL + Galera on Linux. It provided a more stable environment as the load was split across the cluster nodes using a load balancer
- It was zero downtime cutover, as we first configured Primary node of Galera as a slave of the existing Master and once everything was tested and validated, we performed the cutover

Results

- Galera MySQL cluster has provided the high availability and scalability to the environment the customer was looking for
- The new solution worked seamlessly for their needs and expectations, and they've provided customer references for a similar model across additional Dental PMS
- Improved reliability and performance
- Datavail provides 24x7 support and coverage to the customer

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