

# LADDERS, INC.

## CUSTOMER SUCCESS STORY

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*Leading job site Ladders chose ClustrixDB™ to eliminate several problems: 1) the need to shard data, 2) master database single point of failure, 3) a single box memory limit, and 4) write bottlenecks (including single-threaded MySQL replication).*

## Before Clustrix

Ladders had been searching for over a year for a scalable database solution. Their main motivators for the search were scalability, fault-tolerance, and a recognition that having to shard would be very time consuming and expensive. Ladders was looking for a solution that would allow them to be ready for unpredictable growth. They wanted their database to be simple, maintainable, and scalable beyond one machine. They also wanted developers to focus on adding value to their product, rather than working on a database layer. On the other hand, Ladders did not want to shard data or give up data consistency and rich queries, having found that it would be inefficient to rewrite 200,000+ lines of SQL code. They tried different MySQL plug-ins and extensions, but all without success. In the end, they analyzed 8 different ways that they could potentially architect their structured data infrastructure and concluded that ClustrixDB was the right solution.

## Choosing Clustrix

**“The primary motivation for choosing ClustrixDB was scalability, fault tolerance and online schema changes.”**  
- Dmitri Mikhailov, Principal Database Architect, Ladders

Ladders chose ClustrixDB for the following:

- Shared-nothing, massively parallel architecture that eliminated the need to shard data
- Full SQL support, simplicity of SQL results in faster application development and lower code maintenance
- High-availability with automatic recovery, because non-stop operations is Ladders' goal
- Online operations, such as schema changes, reprovisioning, and cluster software upgrades
- Concurrency and transaction control—efficient MVCC and ACID implementation
- Administration simplicity, scaling read/write throughput simply by adding more nodes
- High node performance, provided by a highly tuned software package and optimized hardware
- Excellent support which is “a must-have feature”

## Testing ClustrixDB for Scalability & Fault Tolerance

**“We had an unwillingness to shard, unwillingness to replace our code base with something more. . . . Nobody wants to shard. People have made investments in their codebase. Why would they want to throw that away?”**  
- Dmitri Mikhailov, Principal Database Architect, Ladders

Ladders is growing fast and they need a scalable platform that can keep up. Yet, they cannot sacrifice fault-tolerance for scalability—Ladders needs both. During their testing, Ladders pulled power cords from cluster nodes during load tests to prove ClustrixDB's resilience. They tested scalability to determine how many concurrent users each node could sustain and whether the cluster could scale both predictably and linearly as additional nodes and users were added.

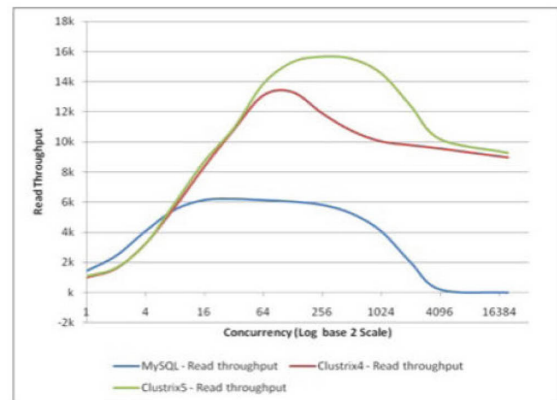
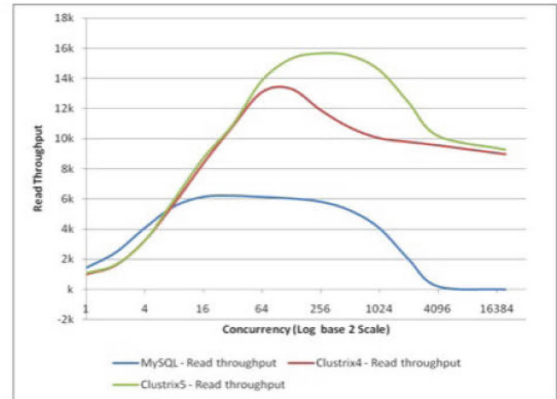
As early adopters they had to make sure they tested everything, including MySQL network protocol compatibility tests and the compatibility with the schema and SQL code base (200,000+ lines of SQL code). They also tested write performance by type (Figure 1, right): single/multi-row inserts and updates, bulk data load and read performance by query type (Figure 2, below): PK, short/long range scans, subqueries, derived tables and joins.

Setting up new clusters and adding nodes is “trivial.” Also, the ClustrixDB cluster supports online schema changes without locking tables, so data layout changes can be made live and on-the-fly. The ClustrixDB cluster allows Ladders to keep growing without having to make complex application and operational changes—things just grow and scale in a fault-tolerant manner.

## Time & Cost Savings with ClustrixDB

By choosing ClustrixDB, Ladders eliminated several problems: 1) the need to shard data, 2) master database single point of failure, 3) a single box memory limit, and 4) write bottlenecks (including single-threaded MySQL replication).

ClustrixDB enabled flexible topologies with other MySQL wire-line compatible databases, supporting multiple replication sources/targets. They were able to reduce overall development costs by increased time spent implementing higher value-added end-user functionality rather than fixing database bottlenecks. By using ClustrixDB, Ladders saved CAPEX: replaced a half-million dollar setup with a \$150K cluster and also made their database setup “greener.”



# Clustrix

Clustrix provides the leading scale-out SQL database engineered for the cloud. With ClustrixDB you can build innovative business critical applications that deliver real-time analytics on live operational data with massive transactional volume. Our exceptional customer service team supports more than one trillion transactions per month across a range of industry segments including Ad Tech, e-commerce, and social analytics. Clustrix customers include AOL, engage:BDR, MedExpert, Photobox, Rakuten, Symantec, and Twoo.com. Headquartered in San Francisco, Clustrix is funded by HighBAR Partners, Sequoia Capital, U.S. Venture Partners, Don Listwin, and ATA Ventures. ClustrixDB is available as a free trial software download that runs on any cloud, and on the AWS marketplace.

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