Mouser Electronics Stays Online with Active/Active Data Center Operations and Zero Downtime Maintenance from ScaleArc

Company: Mouser Electronics

Headquarters: Mansfield, TX

Industry: eCommerce

Database Environment:
SQL Server 2014

About: Mouser Electronics is a worldwide leading authorized distributor of semiconductors and electronic components for over 500 industry leading suppliers.
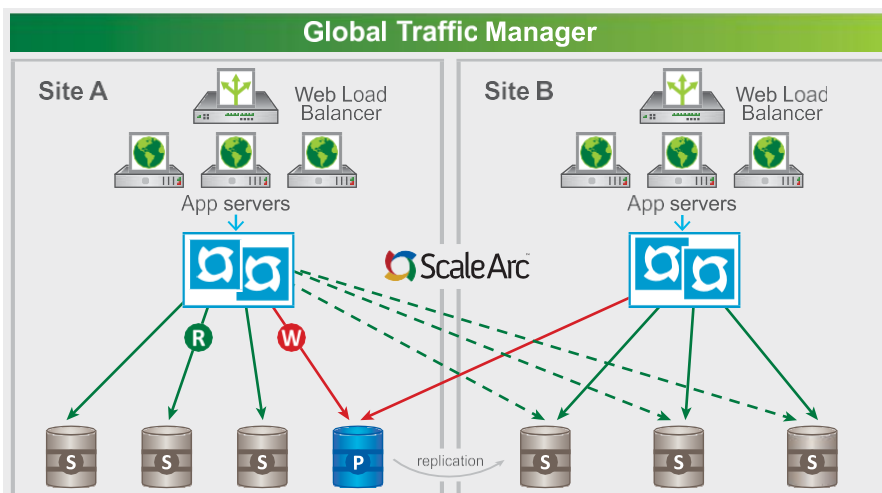
Mouser Electronics, a Warren Buffett Berkshire Hathaway company, is a leading global distributor of semiconductors and electronic components. Over the past several years, Mouser has experienced phenomenal growth of its online electronic component sales. Even a minute of website downtime costs thousands of dollars in lost revenue.

Business Challenges

- Boost performance and availability of mission-critical component ordering application
- Overcome hardware failure of primary database server without downtime to the website
- Move from active/stand-by data center to active/active data center at the database tier

Solution

Mouser deployed ScaleArc in conjunction with SQL Server 2014 and its AlwaysOn feature set to enable failover without application errors and support load balancing across its data centers, enabling distribution of the database load. Mouser needed strong failover not just within one data center but across to its second data center. The ScaleArc software automates and accelerates the failover process for unplanned server failure by effectively steering and load balancing traffic across both data centers and allows Mouser to avoid application errors.

Benefits

- Integration with SQL Server 2014 for continuous availability

- Zero downtime maintenance

- Auto failover for high availability across data centers

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"When we sustained a sudden hardware failure, which caused a hard shut down of our primary SQL Server node without warning, ScaleArc instantly load balanced the reads to the remaining servers and buffered the write requests while the SQL cluster passed Primary to another node. The recovery was fully automatic - there was no outage, no dropped sessions, and no tangible customer impact. Impressive."

– Mark Price
Director of Internet Ops & Architecture
Mouser Electronics

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One morning, Mouser experienced a sudden hardware failure, causing an immediate hard shut down of the primary SQL Server node. There were over 1,000 active sessions on the cluster at 40,000 requests per second. Alerts were triggered and the response team rushed to their workstations to address the problem, but the ScaleArc/SQL cluster had already handled the situation, instantly load balancing the reads to the remaining servers and buffering the write requests while the SQL cluster passed Primary to another node. ScaleArc made the recovery fully automatic with no outages, no dropped sessions, and no tangible customer impact.

Because Mouser's eCommerce website serves global customers 24x7, zero downtime maintenance is a key capability for the IT organization. Mouser leverages the ScaleArc failover technology to eliminate maintenance windows and avoid application downtime while keeping servers fully up to date with patches, improving the customer experience.

Finally, Mouser was deploying ScaleArc in conjunction with SQL Server 2014. ScaleArc integrates with AlwaysOn, learning server cluster and status information from it and detects when a primary has failed. ScaleArc maintains client connections and queues inbound queries during the failover, so once the secondary has become the new primary, ScaleArc forwards the queued transactions, preventing application errors during failover. Additionally ScaleArc for SQL Server deploys transparently, requiring no changes to applications nor database configuration.

Results

After deploying ScaleArc Mouser was able to leverage the technology to eliminate maintenance windows and accelerate the failover process.

Performance Improvement
40% of queries are being served from ScaleArc's cache, boosting performance of Mouser's website and alleviating load from its database servers

High Availability
Mouser is maintaining zero downtime, saving thousands of dollars per minute from potential down time.

Replication-aware Load Balancing
During a full hardware failure of the primary SQL Server node, ScaleArc load balanced reads to remaining servers and buffered write requests while the SQL cluster passed Primary to another node.

No More Maintenance Windows
ScaleArc allows Mouser to take servers down for maintenance without interrupting service to its global 24x7 eCommerce website, delivering zero downtime for maintenance.

ScaleArc is the leading provider of database load balancing software. The ScaleArc software inserts transparently between applications and databases, creating an agile data tier that provides continuous availability and increased performance for all apps. With ScaleArc, enterprises also gain instant database scalability and a new level of real-time visibility for their application environments, both on prem and in the cloud. Learn more about ScaleArc, our customers, and our partners at www.scalearc.com.