Mouser Electronics is a worldwide leading authorized distributor of semiconductors and electronic components for over 500 industry leading suppliers.

Company

Mouser Electronics

Headquarters

Mansfield, TX

Industry

eCommerce

Database Type

SQL Server 2014

Mouser Electronics

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

Integration/Ingestion of sensors

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.

- 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

The 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.

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.

Technical Details

- ScaleArc for SQL Server deploys transparently no app changes, no database changes

- ScaleArc enables auto failover that spans two data centers and avoids app errors

- ScaleArc has enabled Mouser Electronics to improve customer experience and ensure 24x7 availability

"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 Operations and Architecture
Mouser Electronics

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
ScaleArc allows Mouser to take servers down for maintenance without interrupting service to its global 24x7 eCommerce website, delivering zero downtime for maintenance.

DEV GRAPH

Benefits

Integration with SQL Server 2014

For Continuous Availability, ScaleArc's software integrates with AlwaysOn, learning server cluster and status information from it. As with Mouser's hardware failure, ScaleArc's software detects when a primary has failed and maintains client connections and queues inbound queries during the failover. Once the secondary has become the new primary, ScaleArc forwards the queued transactions, preventing application errors during failover.

Zero Downtime Maintenance

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

Auto Failover for High Availability Across Data Centers

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.

About DevGraph

The DevGraph family of products was developed by DevFactory. DevFactory was founded in 2008. The company's solution suite of DevSpaces™, CodeReview™ and CodeFix™ enables developers to reduce, outsource or automate things that cause undifferentiated heavy lifting to focus on building great software. DevFactory has taken IT software services out of the dark ages of custom scripts and manual processes to today's NoOps, low code, highly automated paradigm – yet delivering fundamentally higher-quality products.