Quantitative Investment Management

Carbonite DoubleTake Availability case study

CARBONITE

"Availability provides ease of mind. We know that if our servers onsite go down we can easily failover to our offsite recovery servers."

Owen Nolasco, DBA

Critical issue

In the world of investing, seconds matter. And hours of downtime can result in lost opportunities, which, in turn, can result in lower investment returns. Thus, Quantitative Investment Management (QIM) needs to make sure that the systems it uses to place and track trades are always available, without exception.

Business challenges

The business of investment management is unforgiving. A lost opportunity is lost forever.

QIM places orders with executing firms and receives fill information electronically. If the firm's systems were down, order placement would slow considerably as the work would have to be done manually. The consequences of large delays in placing trades could be substantial.

It's impossible to predict the value of those lost opportunities, but the human resource costs that QIM would incur during a downtime event are somewhat easier to forecast. It's estimated that each hour of downtime would result in as much as a 40-hour week of extra labor.

In addition to ensuring application uptime, QIM must safeguard the availability of its data. Its servers store information on all of the orders the firm places and executes. Losing that data would result in untold work reconstructing it from other sources.

Yet, mishaps happen. Servers and disks crash. Power goes out. Disasters strike. And, even if none of those crises occur, systems have to be upgraded and maintained from time to time. QIM needs a reliable way to protect its data and applications no matter what may happen.

QIM QUANTITATIVE INVESTMENT MANAGEMENT

Company name

Quantitative Investment Management

Headquarters

Charlottesville, Virginia, USA

Industry

Investment management

Business environment

- Founded: 2003
- Employees: 33
- Assets under management: >$2 billion
- Privately held

Implementation team

Quantitative Investment Management

CARBONITE

Solution

QIM uses SQL mirroring as its first line of defense against data loss, but that doesn't reliably safeguard the continuous availability of both data and applications. For more than three years, QIM has used Availability to fill in the gaps and provide a higher level of availability protection.

QIM found that installing Availability was fast and easy. The firm performed the entire install process in-house. Its first installation took about one hour, but the company can now install new instances in about 10 minutes.

Availability replicates changes made on QIM's three virtualized Windows-based production servers in the primary data center in Virginia to replicate servers at a site in New Jersey—a few hundred miles away. Because replication happens in real time, the recovery servers are always ready to run with thoroughly up-to-date data.

What's more, the distance between the primary and recovery sites means that, even if the worst should happen and a disaster knocks the primary data center offline or destroys the data housed there, QIM will still have access to all of its data and applications at the recovery site.

The availability benefits of this solution are more than just theoretical. One of QIM's R&D servers once went down due to a power-supply problem. When that happened, QIM failed over to the recovery server with almost no downtime.

QIM has also performed failovers during a couple of weekend fire drills. Those failovers, too, were completed successfully and smoothly, with virtually no downtime.

Support is another of Availability's strengths. "We are very happy with the technical support responsiveness we've received," said Owen Nolasco, DBA at QIM.

Nolasco sums up the primary benefit of Availability succinctly. "Availability provides ease of mind. We know that if our servers onsite go down we can easily failover to our offsite recovery servers."

Contact us to learn more

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Results

- Virtually eliminates application downtime
- Saves dozens of person-hours of work for every hour of downtime avoided
- Protects all data in real time
- Installs in 10 minutes
- Provides peace of mind

Technologies

Software:
- Carbonite DoubleTake Availability
- Microsoft Windows Server® and SQL Server®
- VMware®
- Quantitative Investment Management custom-developed software

Hardware:
- Dell servers