

How The US Navy Helped Transform Today's BDR Market

The Quorum Origins Story





With great military powers, comes great IT responsibility

When it comes to backup and disaster recovery, we all know the cardinal rule: uptime is everything. Every second of downtime costs you lost revenue, drains away your brand dignity and sends your IT team into a frantic tailspin.

Compare that to the consequences of downtime in the military, though, and the idea of a lost sale starts looking pretty trivial.

The United States Navy has a number of sophisticated weaponry, defense and monitoring systems. Some of the most sophisticated missiles and torpedoes on the planet are developed and used by naval leaders. As the saying goes, with great power comes great responsibility – and when it comes to the Navy's missile tracking systems, it is critical to keep those systems synchronized, accurate and performing at all times. With such high stakes, failure is not an option.

Consider, for instance, that some missiles use satellite data to reprogram themselves while in motion. They can be sent to a new aimpoint or mission and can send back status messages during the flight. Whether fired from the surface or under the water, they can take out land targets at far distances using precise navigation capabilities and timing. They can also send back images of the target, detect enemy ships or other possible threats, and launch responses. All told, they can detect and address more than 100 targets at a time.

Impressive? Undoubtedly. But executing on this kind of advanced military defense means the Navy systems must be flawlessly available and in sync. There is no margin for error; every ship and every team must be able to track and control their missile systems at every moment.

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Birth of a BDR Innovation

Aware of the catastrophic possibilities if their systems did fail, some naval leaders approached Quorum CTO, Marc Goroff, a few years ago and asked for a solution that could ensure perfect their system accuracy. They needed continuity and performance, and it had to be a solution that worked consistently with no hand-holding or extra specialists required. The solution also needed to guarantee complete access to full and accurate information, instead of partial data from a portion of their systems.

Goroff got to work creating a policy engine that would help them synchronize their missile-tracking systems to a degree of unprecedented precision. Because the Navy needed a solution that didn't consume all their bandwidth, Goroff and the Quorum team arranged for double deduplication, once at the source and once at the repository, thereby reducing storage and network bandwidth requirements.

He also designed a complex recovery process that was automated and simple, unlike the laborious current solutions on the market that required significant maintenance and took hours to recover. By creating a 2-minute recovery without the cost of replicated SANs, he offered the Navy something entirely new in the market. Because the solution created full replications of the server image, applications and data at whatever frequency the team needed, they had access to up-to-date information whenever they needed it.

The solution was appealing to organizations beyond the Navy, including other military organizations such as the Canadian Navy. At one point, Citrix showed interest in turning the Quorum solution now called onQ into a management engine for Citrix XenServer. At this point, the Quorum team realized how well the solution worked in solving disaster recovery situations.

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onQ offered new and remarkable features in the world of BDR, such as instant recovery that meant teams could recover from any failed server with one click. The automatic testing of backups meant virtual machine clones were always up to date and ready to run. The new solution also offered policy-based migration and long-term storage of virtually unlimited de-duplicated data, solving challenges around the need for extended data preservation.

Quorum continued developing the product, keeping recovery separate from production by ensuring a fully isolated sandbox environment could enable patch testing, upgrades and configuration changes before moving into production. This offered teams another layer of protection and efficiency. Given the varied systems the Navy and other organizations worked with, Quorum designed the solution to be flexible, offering a range of failback options that let teams failback from physical to virtual, virtual to virtual, or virtual to physical hardware.

Today the Canadian Navy is still using Quorum's onQ product – but to answer the vast demand for its fast and accurate BDR capabilities, Quorum has gone commercial. An agnostic solution that fits into any environment to provide backup and disaster recovery capabilities, onQ now offers the fastest recovery in the market, as well as the easiest backups. The solution that was initially designed to flawlessly meet advanced military requirements is now helping some of the biggest names in business recover painlessly from natural disasters, cyber attacks and failures – and doing so while maintaining high performance and strengthened security.

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