10X Performance for 87% Less Cost. Increase in Flexibility and Availability.

CRW ENGINEERING CASE STUDY

Datrium™

Engineering
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Challenge

As the company virtualized its environment, performance lagged with its aging storage hardware.

Results

- 8x more flash deployed than woud have been possible with Nimble Storage

- Decreased storage management time by 100% — no longer a need to manage storage

- 10x faster performance

> "The biggest selling point with Datrium was the ability to abstract cache (Flash SSDs) – the most expensive part – from the storage array and put it into the host. It's a huge benefit because we can bring our own flash and the price point is much, much less. Plus, we can upgrade flash whenever we need to."

Callie Rabe
IT Manager

Company Challenge

VDI Response Times

In recent years, the 80-employee firm has virtualized all servers and is well on its way to virtualizing all desktops. But as VDI demand increased, the firm found latencies and delays likewise increased – especially at a newly opened satellite office one hour away.

"Our storage architecture didn't meet the needs of the VDI platform, particularly at our new location," says Callie Rabe, IT manager. "We're working on really research-intensive programs, so latency kills the day for our staff. We saw read/write latency and drops with our aging NetApp hardware, so a project that should take four hours was taking up to six hours."

CRW evaluated several storage options with the goals of improving performance, caching, scalability and cost. While the company began by looking at options from its incumbent storage provider, NetApp, it found the cost prohibitive.

The firm additionally looked at Nimble, which came in at a lower cost than NetApp. However, the firm would still need to buy a storage area network (SAN).

Results

Better Economics Than Storage Arrays

By contrast, Datrium's Automatrix platform offered CRW the performance, simplified scaling and set-it-and-forget-it management in a single solution with a compelling cost proposition. With Datrium's split-provisioned storage systems, SSD on the host replaces that in the storage array. By freeing CRW to select server-based commodity SSDs at one-eighth the cost, CRW was able to deploy far more flash on the same budget than would have been possible with Nimble Storage.

"Really, the biggest selling point with Datrium was the ability to abstract cache – the most expensive part – from the storage system and put it into the host," says Rabe. "It's a huge benefit because we can bring our own flash and the price point is much, much less. Plus, we can upgrade flash whenever we need to.

> "We've seen such increased performance that morale and utilization have gone up. Employees are not calling us about lags anymore."

Callie Rabe
IT Manager

With Datrium, CRW only needs a single storage system. As the firm's needs grow, it can simply add commodity flash to existing servers. As for usable cache, Datrium – with deduplication and compression – delivers about 8X the cache of alternatives the company considered, reducing cost by 87 percent.

Set-It-and-Forget-It Management
CRW deployed Datrium DVX data nodes which mechanically appears to be a storage array, but serves as a durable off-host appliance that provides a large amount of capacity and is only receiving writes. Autonomous data services, such as deduplication, compression and RAID are contained in host-based software, which CRW simply uploaded to its vSphere hosts.

After less than a day of setup, CRW's IT team members now no longer manage storage – enabling the company's one full-time staffer and a contractor to focus on other tasks. "Before, we spent a few hours a week on storage management," Rabe says. "Now, it's zero time because it's just a single NFS (network file system) share."

When CRW does need to check in on storage, it's simply a matter of looking at vSphere, where they can see utilization and performance provided by the Datrium vCenter plug-in. "With indicators in vSphere, we don't have to worry about another tool to log into," Rabe says.

Boost in Performance = Boost in Employee Productivity
Most importantly, performance has jumped with Datrium, at times up to 10X faster than before. That translates to more productive employees. "We've seen such increased performance that morale and utilization have gone up," Rabe says. "Employees are not calling us about lags anymore."

Rabe expects storage to increase by about 50 percent as usage grows. Fortunately, more capacity is as simple as adding a new host. "With Datrium, we have a lot of room to grow – an amount that far exceeds any of the storage planning growth we anticipated," Rabe says. "And we'll be able to grow as much as we need with just one storage system for the entire organization, and either add server cache to our existing hosts or an additional server as needed. When technology changes, we're able to adapt with it easily." Beyond the experience with Datrium solutions, CRW likewise appreciates the people at Datrium. "Everyone we've worked with at Datrium is at the top of their trade," Rabe says. "The whole process has been seamless and a lot of fun."

About CRW Engineering
In communities across Alaska, CRW Engineering Group provides full-service engineering and surveying services. The firm's projects include everything from recreation trails to major water systems.

Learn more about Datrium at www.datrium.com.