Oil and Gas

Sinclair Oil Gains the Speed and Visibility Needed for Expanding Digital Repositories with Qumulo File Fabric (QF2)

Sinclair Oil imported hundreds of thousands of documents to a new digital repository and found that its old storage platform couldn't keep up. QF2, a modern, highly scalable storage system, gave Sinclair not only the needed performance, but also the data visibility necessary to properly monitor the rapidly growing digital system.

Evolve or Go Extinct

Sinclair Oil is a $7B petroleum corporation based in Salt Lake City, Utah. Its vertically integrated petro operations run upstream to downstream, from exploration, drilling and production, all the way to distribution and retail. The company's separate hospitality division, meanwhile, operates the Grand America Hotels and Resorts chain.

Widely known for its iconic green brontosaurus logo, Sinclair recently concluded that its old data storage solution, located at one of its two refineries in rural Wyoming, was itself becoming a dinosaur. The problem surfaced as Sinclair adapted to new petro-industry standards demanding digital documentation and cataloguing of corporate processes and infrastructure. For Sinclair this meant converting and storing hundreds of thousands of documents covering procedures, safety protocols, piping and instrumentation diagrams (P&IDs), spec sheets and more.

Unfortunately Sinclair's existing legacy storage platform, a cluster of highly virtualized NetApp servers, wasn't up to the challenge of housing the company's vast new digital asset repository.

"We chose EMC's Documentum platform as the document management system, and in implementing it realized that our storage just wasn't designed to handle the resulting millions of individual files," said Nathan Larsen, Director of IT at Sinclair Oil. "It created undue overhead that began impacting the production environment housing SQL servers and other critical systems, so we knew we needed to make a change."

Moreover, with the existing legacy storage platform there was no easy way to track the digital transition's progress, or its impact on capacity and performance, without laboriously running manual reports and walking the entire file system tree. And, given the rapid speed of the digitization process, by the time those reports were eventually available, they would already be out-of-date.

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So, Larsen and his team began the search for a modern file storage platform.

An Agile Approach to Storage

Initially, Sinclair considered simply updating its existing NetApp infrastructure, or perhaps – since they were already using EMC's Documentum platform – adopting EMC's Isilon scale-out NAS solution. But once Larsen learned of QF2, the right answer quickly became apparent.

Solution Overview

- 4 Qumulo QC24 Hybrid Storage Appliances
- NFS and REST protocols
- Qumulo Care enterprise support

Key Benefits for Sinclair Oil

- Increases performance to handle the millions of files and high IOPS needed for large document management repository
- Delivers the data insight needed to track digitization process and impact on storage subsystems
- Responds to changing business needs through rapid two-week software development and release cycles
- Eliminates administrative overhead with straightforward deployment and simple management
- Ensures ongoing peace of mind with proactive, knowledgeable Qumulo Care support

QF2 is a modern, highly scalable file storage system that delivers the real-time analytics necessary for visibility into data usage and performance at petabyte scale. Larsen was attracted by the immediate and actionable insights into data usage and storage performance – both of which would be critical for Sinclair's digital repository.

Yet what tipped the scales was Qumulo's agile "two-week sprint" software development and release cycles, which rapidly incorporate customer feedback and new software features.

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"We use the same agile methodology at Sinclair, and I've seen first-hand the ability to drive good products into production, so much faster than with traditional 18-month monolithic releases," notes Larsen. "Given Qumulo's existing lead on its competitors, I knew that fast development pace would help keep it out in front of our needs."

Sinclair quickly deployed four QC24 flash-first hybrid storage appliances into its central data center for three months of testing. "And, I do mean 'quickly' deployed," Larsen says. "I don't think the Qumulo engineer was here for even an hour. We just popped in some IP addresses and off it went; the deployment was so quick and painless it shaved off weeks of fiddling that comes with traditional storage systems."

Larsen and his team ran the QF2 cluster through its paces, using several SQL virtual machines and SMB shares to replicate heavy I/O loads and massive file transfers. "We really pounded on the system for several months of testing, and the QF2 appliances were rock solid throughout. That's when I knew we were ready for production at our refinery," he says.

Drilling Down for Data Analytics

With the new system in place, Larsen's team quickly confirmed that QF2 provided not only the scalability and performance required for Sinclair's document management, but also the real-time visibility and analytics needed to assess system usage. The QF2 dashboard is available through any browser, and its REST API allows for easy report customization or even integration into other data systems.

"QF2 has given us insight on our systems and storage that we just didn't have before," said Larsen. "I can pop into the administration console and immediately see: where we're at from an IOPS standpoint, how many files we have, when the newest files were uploaded, etc., all of which is tremendously useful for understanding how we're using storage."

According to Larsen, the QF2 system hasn't been just "amazingly fast" and highly visible, but also largely hands-free. "We just watch our emails for alerts, and when the new QF2 software updates are released we run them that night. Otherwise, it just does its thing. There's really no comparisons to our earlier storage systems. QF2 is just so straightforward and easy-to-use," Larsen remarked.

Yet, if Larsen's team ever does need help, he can turn to the Qumulo Care customer success team.

"Qumulo Care is absolutely phenomenal – the best support I've seen from any vendor," Larsen says. "The team is very proactive, knowledgeable, and really strives to make a personal connection. I even have the cell number for my tech liaison. It's been a real pleasure to deal with Qumulo."

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With newfound confidence in its ability to manage storage, Sinclair has already been exploring ways to expand its QF2 deployment, starting with a move of all of the refinery plant's 3D renderings onto QC24 appliances.

"Qumulo came along at the perfect time for us, and couldn't be a better fit for what we need to do," concluded Larsen. Sinclair Oil has long been a fixture on the American motorway, and represents a true American success story. Now Sinclair appears to have once again struck oil in selecting Qumulo as its modern, highly scalable file storage solution.

Sinclair is headquartered in Salt Lake City, Utah, and is part of the Sinclair family of companies. Sinclair owns and operates two refineries in Wyoming and over 1,000 miles of pipeline in the Rocky Mountains. The corporation markets fuel in 19 states, supplying fuel to over 1,400 branded stations making the Sinclair brand a prominent and welcome sight to the motoring public for nearly 100 years. For more information please visit www.sinclairoil.com

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