Getting Power Peace of Mind with Remote Data Center Monitoring and Management Through EcoStruxure IT

Cavern Technologies - Lenexa, Kansas, US

Cavern Technologies relies on Schneider Electric’s solution platform to better service its colocation customers.

#WhatsYourBoldIdea

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“Our promise to offer the best care in the data center industry is central to all we do and will continue to be the cornerstone as we move forward. We’ve come a long way thanks to long lasting relationships built on our dedication to delivering excellence for ALL our customers.”

– John Clune, CEO and Chief Strategist, Cavern Technologies

Overview

Being situated within a 3 million-square-foot limestone bunker, 125 feet under the Kansas prairie, with 18-20 foot high ceilings beneath a layer of shale, makes Cavern Technologies colocation data center unlike other subterranean facilities.

The composition is stronger (5x more than cement), the environment is consistently temperate and drier than most, and the structure offers protection from potentially disastrous Midwest weather like tornadoes, hail and lightning.

Plus, on top of controlled biometrics access, the location is so secure, the National Archives houses a records center and archival storage rooms in part of this old mine which is shared by a range of select businesses.
What’s also different about Cavern Technologies’ 300,000 square feet — its walled, private customer suites with individual views of power. This visibility is made possible through Schneider Electric’s open, interoperable, IoT-enabled EcoStruxure system architecture and platform. EcoStruxure’s Asset Advisor combines the components of EcoStruxure IT’s on-premise StruxureWare for Data Centers (DCIM suite) with the ExcoStruxure IT app (mobile app) for instant access from anywhere, with Schneider Electric’s Service Bureau (24/7 monitoring) to offer 24/7 data driven predictive service for business continuity, vendor neutral asset risk management via sensors and cloud-based monitoring tools, and expert service bureau with recommendations and proactive resolutions. These offerings make Cavern Technologies particularly suited to the regulated industries it serves — financial, healthcare, insurance and technology.

“We focus on the infrastructure and providing an enterprise-like environment. Our customers say they get as much, if not more, visibility into their data centers here,” explains Mike McDaniel, vice president of facilities engineering, Cavern Technologies, “than they would running their own on-premises data centers. We enable them to see what’s going on with their UPS.”

John Clune, CEO, Cavern Technologies, adds, “We develop, lease and operate enterprise-class data centers, 125 feet below ground in a secure, environmentally-friendly facility. With our private, dedicated suites, we customize to our customers’ needs, and we’ve really focused on not only operational excellence, but also transparency.”

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– John Clune
CEO
Cavern Technologies
Most of Cavern Technologies’ customers choose to use dedicated Cavern-owned Schneider Electric serviced UPS’. Power is ramped up and down based on the required load, which changes as the customer’s business grows. In one case, an e-discovery firm customer started with 5KW and is now up to 80KW, and have gone from half a rack to needing over 15 racks. “The flexibility Schneider Electric products provide are key to building our customers’ businesses,” says McDaniel.

“Our relationship with Schneider Electric has really developed over the last 10 years,” explains Clune. “We initially started with the rack and cabinet portfolio and, since then, have expanded to a true partnership. Schneider Electric provides our UPS’, PDUs, containment, as well as software and services.”

Cavern Technologies is running upwards of 50 individual UPS’ and needed an integrated system with a single view and resources to streamline management and troubleshooting such a large amount of equipment and to service any issues around the clock.

“We’re responsible for clean power and cooling up into the rack,” says McDaniel. “And, while other data centers tend to operate disparate systems, here, we’re basically integrated into two. We were able to integrate our non-Schneider Electric building automation product with EcoStruxure’s on-premise DCIM software StruxureWare for Data Centers.”

Now, the health of all the UPS’ in the facility is easily ascertained, and status can be gained at a glance. For example, when performing transfers from utility to generator, naturally, there’s a fraction of a second open in transition. Alarming is sent via the DCIM software through the EcoStruxure IT app. Managers can login through the mobile app and have instant access to live data. Without these tools, McDaniel says, engineers would have to log into each individual UPS to check status.

“That check alone would take us 20 to 30 minutes, versus just looking at the EcoStruxure IT app which shows a big smiling green face when everything’s back to normal,” he explains. “Our customers can choose the specific alarm notifications they want to see and punch up the view in their network operation centers.”

StruxureWare for Data Centers can also proactively alert if a UPS is out of humidity or temperature tolerance. In addition, the data provided through the DCIM software enables us to provide consumption billing when requested by our customers.

“Schneider Electric’s software and services really have allowed us to give our customers full transparency into what’s going on in the facility — everything from the power, the cooling, temperatures and security monitoring, to achieve the 100% up time for their mission critical apps,” says Clune.
At your service via mobile app

Should there be any UPS issues detected via the DCIM software, immediate notification is sent, not only to Cavern Technologies personnel via the EcoStruxure IT app, but also to the Schneider Electric Service Bureau to help diagnose and fix the problems.

“Our engineer is alerted, and we’ve also got back-up from Schneider Electric’s Service Bureau. The Schneider Electric techs are available 24 hours, seven days a week, which provides a redundancy factor,” says McDaniel. “They partner with us to ensure the uptime of our customers.”

The EcoStruxure IT app allows for remote action, so on-call engineers don’t have to be on site to troubleshoot. The app has also made it easier for Cavern Technologies engineers to interact with the service bureau. Texting expedites problem solving, and communications are captured in app, so anyone who needs to see incident status can get the details.

“That's a lot better than sending emails back and forth,” he says. “Now, whenever engineers see a power module fault, they pull up that UPS on the app and text pertinent information such as the model and serial numbers, load and firmware date to Schneider Electric technicians who are dispatched for repair or replacement. It’s incredibly valuable to know we can count on the techs and that even after hours or call off issues are covered under the terms of our service agreement.”

― Mike McDaniel
VP of Facilities Engineering
Cavern Technologies
A monthly report delivers a look back with details of all incidents to help identify trends. Plus, the data presents predictive insight. Knowing which assets are approaching end of life — such as power modules, batteries, static switches — helps with annual capital planning according to McDaniel.

He says, “Schneider Electric’s Field Services team always comes through during our annual preventative maintenance. We typically find something that would have become an issue at a point outside of the maintenance window, and we correct it proactively.”

McDaniel counts lean but redundant operations as a big benefit of the software and service as well. “We don’t require a large number of people working on site because the remote monitoring app is backed up with Schneider Electric’s Service Bureau.”

“Our success in the private data suites has really come from our flexibility, and we worked with Schneider Electric to help achieve the customization our customers need,” says Clune. “The EcoStruxure platform has enabled us to provide another level of information to them, and the analytics helps us every day to provide better operational excellence.”

Next, Cavern Technologies intends to expand EcoStruxure’s Asset Advisor capabilities beyond UPS to cooling units and other equipment. The company also intends to expand outside the Kansas City market.”
Solution and Benefits: EcoStruxure™ Asset Advisor

EcoStruxure’s on-premise Struxureware for Data Centers software: Real-time visibility and insight

- Monitoring
- Intelligent diagnostics
- Analytics
- Reporting
- Audit trail

EcoStruxure IT App: Smartphone app

- Instant access to live data
- Live alarm data
- No VPN needed
- Reports and insights

Schneider Electric’s Service Bureau

- 24/7 data driven predictive service for business continuity
- Vendor neutral asset risk management via sensors and cloud-based monitoring tools
- Expert service bureau with recommendations and proactive resolution

Challenge:

- Meet SLAs and make sure power is available at all times
- Resolve issues quickly when they occur
- Enhance resources for 24/7 operation

Want to learn more?

[Watch the video of our partnership with Cavern Technologies](#)