

THE UNIVERSITY OF FLORIDA'S
COLLEGE OF VETERINARY
MEDICINE SOLVED ITS POWER
PROBLEM BY BUILDING A
NEW DATA CENTER WITH
ROOM TO GROW.

A POWER PLAN FOR THE FUTURE

A woman with dark hair, wearing a blue lab coat and a headset, is smiling. She is in a server room with rows of server racks. A red circuit diagram is overlaid on the background, showing a UPS (Uninterruptible Power Supply) unit connected to various components labeled O1 and O3.

As a twenty-four-hour animal hospital with 40,000 patients per year, system uptime is critical at the University of Florida's College of Veterinary Medicine (CVM). So having received the okay for new servers and a storage-area network, CVM couldn't wait to flip the switch.

For Sommer Sharpe, infrastructure manager at CVM, there was one problem: "I had fourteen brand new HP servers with dual-cores that I couldn't plug in," she recalls. "No power."

The equipment was overloading the circuits because they were low voltage instead of high voltage, explains Sharp. The data center was also too small for the number of server racks being used, and the power grid was maxed. So CVM decided it was time to invest in a new data center.

That's when Sharp ran into problem number two: She didn't know much about power. "I called CDW•G and I said, 'Hey, I need power. Do you have anyone on staff who can help me?'" Sharp recalls. "I wouldn't even know where to start or what to ask."

Sharp told her CDW•G account representative that at the time she wasn't brand loyal to any one vendor. They discussed her needs and the different options available to her and decided that APC equipment was the best fit.

She decided to purchase an APC InfraStruXure (ISX) solution complete with power, environmental management controls, server racks, switches and other peripherals all customized to work together.

Not only has the new system provided power to the data center, but it's also provided room to grow and a lot of bells and whistles. The APC system CVM purchased

comes loaded with monitors that track everything from heat and humidity to power shortages. If there's a problem, the system will automatically shut down servers in priority order and alert Sharp so she can address the situation.

"It's self-sufficient. It tells me what I need to do. It does what it's supposed to do," Sharp says. "There's a brag factor that comes with it. It's quite a system."

OUT WITH THE OLD

The College of Veterinary Medicine's old data center was housed in a 12 feet by 14 feet room. "It was in a closet before," Sharp says. "We had to go outside to change our minds."

CVM had long outgrown its fourteen-year-old data center, and the power issues finally forced administrators to replace it. Rather than cut corners, however, "They let us do it right the first time," Sharp says. "We were able to do what we needed to do without worrying that in two years we'll have to upgrade again."

Sharp wanted an intelligent system that could manage the power in the data center on its own, but she also wanted it to notify her if something went wrong.

For instance, if there was a power failure at 2 a.m., the backup power would kick in, the system would alert Sharp to the problem and it would begin to send shutdown

CVM AT A GLANCE:

The University of Florida's College of Veterinary Medicine in Gainesville is the state's only veterinary college. Between admissions and farm visits, its twenty-four-hour hospital sees about 40,000 patients a year. More than 2000 veterinarians have graduated from CVM since it opened its doors more than thirty years ago.

commands to non-mission-critical servers in a cascading series so they could turn off safely and preserve power for mission-critical machines.

She did research online, but her eyes started glazing over. She had purchased equipment from CDW•G in the past, but she never realized the scope of all that CDW•G could offer her. Not only did CDW•G teach her about power systems, it also gave her the pros and cons of different products, as well as feedback from other customers.

"I really appreciate good customer support," Sharp says. "I wear many hats around here so it's nice to be able to call up one place for all my technology needs. I tend to be very loyal to my vendors when they provide good support."

The APC ISX system was a good fit for CVM because it is easily scalable, explains Paul Sawyer, CVM's account manager at CDW•G. CVM was able to open a larger circuit of power into the data center. ISX serves as a pool for the power, conditioning and cleaning it and sending it out to the servers, as well as serving as a backup power supply.

The architecture consists of two pieces of equipment: the uninterruptible power supply (UPS), which holds the batteries that back up the main power supply, and the power distribution unit (PDU), which is where the power comes in and is distributed through cables to the individual server racks.

When CVM purchased the system, Sharp didn't realize that new APC racks were built into the quote for the entire package. "When they came, it was like Christmas," she recalls. "That was a nice bonus. CVM already had Compaq racks from the old data center, but the APC racks were designed specifically for this system and fit together perfectly, she says.

The system is monitored centrally so she can see everything that's going on. If a power strip goes out, she's notified. If there's a power failure, she's notified. It even has security controls that notify her via e-mail if there's an unauthorized attempt to log into the system. "It's pretty slick," Sharp says.

MINDING THE STORE

The ISX system consists of modular components designed to give organizations the flexibility to add to or replace parts as needed. An environmental monitor called NetBotz tracks the heat, humidity, air flow and other criteria affecting each component. It even comes with a camera.

Because of ISX's modular design, the installation was straightforward and quick, Sharp says. Her one regret is that she couldn't purchase APC's chiller. The school's physical plant department decided on a larger chiller instead. The disadvantage is that it can't be monitored by NetBotz along with the rest of the APC components.

Overall, the data center has run smoothly since CVM installed the ISX equipment. During a power outage drill in February, Sharp got to witness the system in action and, she says, it performed every task exactly as planned. "I don't have a thing to worry about," she says.

Because the system is self-monitoring and will notify her if there's a problem, Sharp doesn't spend as much time managing power. Those hours of freed-up staff time help offset CVM's \$150,000 investment in the system.

But, Sharp points out, the biggest return is the intrinsic value the system provides. CVM is protecting its physical hardware and data and providing more uptime for users. "What I appreciate most is it's giving us peace of mind," she says. ♦

CONSIDER THIS:

Five factors to consider when looking into a new power solution:

1. Is it scalable? Modular components are easy to install and expand.
2. Is it self-managing? Can it safely shut down computers to protect data and preserve power in an emergency?
3. What applications will it support? Mission-critical applications should be backed up on larger power solutions with longer runtimes.
4. How much runtime is needed? More batteries or an additional backup system can keep systems running longer if power goes out.
5. What can you keep and what needs to be replaced from your existing infrastructure to integrate a new power solution?

CDW•G offers technology service support from top manufacturers and service providers across all product categories.