Switched PDUS + SPM = Power Control

Joseph Keena - Manager for Datacenter Operations UF Health Information Technology

INDUSTRY
Healthcare

LOCATION
Shands Health Care, UF Health
Gainesville, FL

KEY CHALLENGES
- Third party access to the datacenter
- Knowing what it costs to run a system
- Custom power solution for new rack
- Collecting environmental information from the datacenter

SOLUTION
- Switched and Switched POPS PDUS
- Sentry Power Manager (SPM)

BENEFITS
- Control
- Reporting
- Integration, ease of use
- Uptime

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Server Technology
Quality Rack Power Solutions

About UF Health

University of Florida Health— the Southeast's most comprehensive academic health center — encompasses the UF Health University of Florida Health Science Center and the UF Health Shands and UF Health Jacksonville family of hospitals and services.

With campuses in Gainesville and Jacksonville, UF Health includes six health colleges, nine research institutes and centers, two teaching hospitals, two specialty hospitals and a host of physician medical practices and outpatient services throughout north central and northeast Florida. Our mission is to promote health through outstanding and high-quality patient care; innovative and rigorous education in the health professions and biomedical sciences; and high-impact research across the spectrum of basic, translational and clinical investigation.

Key Challenges

Over the past 50 years, the healthcare industry has undergone radical transformation. Medical imaging has transitioned from film-based X-rays to digital systems. CAT scanners, PET scanners, ultrasound and other imaging technology have been added to the doctor's diagnostic arsenal, creating an ever increasing pool of information as more people than ever before access medical care. At the same time, medical records have transitioned from paper-based file systems requiring rows of filing cabinets to fully electronic records stored on site in HIPAA compliant electronic medical records (EMR) on modern servers and storage appliances.

The UF Health Shands facilities located in Gainesville has grown along with the changes in population and medical technology. Joseph Keena, Manager for Datacenter Operations for Shands, has spent the last 10 plus years diligently working to keep ahead of the increasing demands placed on the Shands IT infrastructure. Their UF Health IT facilities have grown from one datacenter hall to four during that time, and Joe has been there every moment to ensure that the equipment is able to run today's compute load and meet the expanding requirements placed on the systems therein.

Having four data halls means that Joseph cannot be everywhere at once. He has to let a number of third parties have access to his datacenters. Keeping control of what comes in and gets added to the datacenter can thus be a challenge, because something new being plugged in could potentially overload a circuit, taking down critical systems and data infrastructure of the hospital.

Joseph Keena
Manager for
Datacenter Operations

"With SPM and POPS, there is value in the data that you can collect."

"Server Technology listens to the customer and dives into what is their true objective and what needs are to be met."

"Server Technology works in a true partnership with the customer. We have a 10 year working history together, and we grew together during that time."

Being in Florida, humidity and temperature are always a factor in the datacenter environment. Joseph has to maintain a watchful eye over the both the HVAC systems providing cooling (primarily) and the IT hardware that is continuously generating heat. Joe needed a means to gather environmental information easily and cost effectively.

A recent project had a new datacenter space being built out with a higher ceiling than his normal room, allowing Joe to deploy racks that were taller than 42U. Joseph needed a custom power solution to fit his taller cabinets and the increased power densities that went with the bigger enclosure. Joseph was not sure at the time whether or not the server team would want blades or 1U servers, thus his application required a mix of outlet types, and he needed to maximize available power.

The Solution

Joseph first began working with Server Technology (STI) about 10 years ago. He selected STI after evaluating a number of power solutions from other vendors. He was intrigued at the time by the potential of remotely monitored (Smart) and remotely managed (Switched) power for his datacenter. Using Smart and Switched products enables Joe and the Shands team to access their rack power distribution units (PDUS) remotely to gather both power and environmental data. Today, Joseph's team has gone a step further by taking advantage of the individual outlet power measuring capability of STI's Switched POPS family of PDUS.

Joseph first sought the ability to do reports on what was going on with power in his datacenter. UF Health Shands IT was using a competitive software package as a data collection tool that featured a power management plug in, and STI was one of the manufacturers supported. When the power management plug in support went away, it became a logical choice for Joe to adopt the SPM power management software from STI.

Adding the environmental probes offered by Server Technology to his cabinets enables Joseph to see what the temperature and humidity of his datacenter look like at a granular, rack by rack level, just as he can with his power. And getting data from the

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probes doesn't cost Joseph any additional Ethernet ports – the probes plug directly into his power strips.

Benefits

Joseph was one of the first adopters to move up from Smart PDUS to the Switched family of PDUS from Server Technology. With the number of people having access to his various data halls, being able to set the outlets to default to the off position was a real positive for UF Health Shands IT style of operation. Joseph could force anyone needing to plug in new gear to come to his team to be assigned an outlet. Combining the power usage information available from the PDUS with the capacity planning reporting capabilities of SPM, Joe was able to quickly and easily determine where he had available power in a rack that could be utilized for the new gear.

Gathering temperature data from his environmental probes, Joseph is able to create a graphical representation of all points within the datacenter, overlaying the data points onto a map of the datacenter floor with real time data. Blue represents something that is too cold, green is operating in the target range, and red is something that is too hot. This makes it easy to quickly grasp how his infrastructure is performing at the macro level.

The SNAP templates within SPM come in really handy for helping with configuring the PDUS to alert at the datacenter operator's chosen set points and alert points. The whole approach that STI takes with SPM + SNAP is good.

Using the graphs, trending, and reporting capabilities of SPM has proven its worth for helping maintain his critical systems. Joseph cites an example where he was able to prevent an outage due to a bad power supply. The reports coming from SPM showed him that the power consumption of a particular system was trending sharply upwards over time. With this information, he had the server taken offline and the power supply replaced and the server returned to service without interrupting operations.

Joseph sees the utility in the future of using Alternating Phase Switched POPS combined with SPM to be able to determine what it costs the hospital to run each individual server in the datacenter. "There is value in the data that you collect," says Joseph. "And alternating phase power lets you cable and balance without re-cabling between the sections. It's a beautiful thing."

"For what some see as a commodity, you guys are constantly innovating so that you are not just a commodity and set yourselves apart from the crowd of 'me-too' suppliers."

"There is value in the data that you collect."

"Alternating phase power lets you cable and balance without re-cabling between the sections. It's a beautiful thing."

Why Server Technology

Server Technology's power strategy experts have provided power solutions for labs, data centers, branch offices and telecommunications operations for 30 years. Over 60,000 customers around the world rely on our cabinet power distribution units and award winning power management solutions to reduce downtime, facilitate capacity planning, improve energy utilization, and drive efficiency. With the best quality, best technical support and most patents, Server Technology products provide uncompromising reliability, innovation, and value for the datacenter. Only with Server Technology will customers Stay Powered, Be Supported and Get Ahead.

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