UCLA

The Greening of a Golden State One Campus at a Time

Overview

"Using SyAM reports we can, easily calculate the cost of power and then calibrate that power draw in order to achieve even greater savings."
Ravi Shah
Chairman UCLA
Green IT Task Force

Sometimes the best ideas - in this case powering down a PC or workstation when it isn't needed - start small. But soon even small ideas, as in the case of UCLA, become the wellspring of innovation and change.

Such was the case when Ravi Shah, Chairman, UCLA Green IT Task Force, system administrator for the Division of Lab Animal Medicine (DLAM) at the Los-Angeles based college discovered when he first deployed power management scheduling software from SyAM Software, a leading developer of management solutions that help organizations like colleges to operate more efficiently using proactive systems management and automated power management.

"SyAM Software stood out because its power management was user friendly, intelligent and could accommodate the requirements of our IT staff"
Jackie Reynolds
UCLA
CIO Anderson School of Business

"It occurred to me that not every user on our network needs their PC, laptop or work station powered up or placed in sleep mode at the same time, but the goal is still the same: to take individual machines off the network and the campus grid when they're not in use," said Shah. "SyAM's power management scheduling solution transparently enables me to tailor the powering up or down of each machine based on the needs of individual users."

Shah suggests another less obvious but no less important benefit.

"It's been my experience that the longer that a computer is used and left on, the chances of failure increase. So, by managing their power draws during off hours, I would anticipate the life expectancy of these machines to be extended."

The savings realized from using SyAM power management utility is a meaningful cog in the wheelhouse of Go Green IT energy practices that UCLA - recently ranked by US News and World Report as second best public and tied for 25th among all universities in the country - is pioneering

The Challenge

When Shah first became a member of the campus Go Green IT team (he was recently named its chairman), he found himself becoming “hyper-aware” of opportunities for savings, above and beyond the those best practices included above. “Previous to SyAM we didn’t have any central management utilities set up. We just applied the same policy across all machines and all users, placing the former in sleep-mode after 10 minute intervals. As far as turning off machines on an individual basis at different times of the day we didn’t have anything like that set up. Obviously as we became more energy-sensitive, we needed a more proactive solution,” admitted Shah.

Los Angeles Department of Water & Power

The LAWDP (Los Angeles Department of Water and Power) offers an expanded Custom Performance Program to include a rebate for specific measures to efficiently control energy use of networked computers, ENERGY STAR® certified office equipment and other plug loads

For Shah, it ultimately turned out to be the behavior of users, in this case exclusively staff that encouraged him to find a better way to manage his day to day and overall power requirements.

“I began to notice there were a number of users that would just leave their computers on and they really didn’t need to because they wouldn’t log into them after work,” said Shah. “I also thought that it would be helpful if in addition to powering PCs up or down we could also ‘see’ and connect to the machines on our network remotely and ideally to patch and update them remotely as well.”

Shah and his team decided that among the benchmarks that a power management solution vendor would have to meet included the following attributes:

Easy to install and manage (something without a steep learning curve)
Lightweight footprint (so as not to interfere with the operations of the computers themselves)
Enable snapshots of the environment (to identify which computers are on or off)
Update software and install patches on demand (adding to the value of the tool)

SyAM Software, which pioneered integrated remote intelligent systems and power management solutions as early as 2004, proved to be an early favorite among competing vendors.

Jackie Reynolds, former Director of IT compliance and head of the Go Green Team for the PC Energy Management project and recently appointed as CIO of the Anderson School of Business, comments on the review and selection process:

“A key piece of the Green IT puzzle at UCLA was reducing power usage by turning off PCs when not in use. The problem we ran into was the need for System Administrators to access machines during the night for backups, patch installations, etc. After testing other products SyAM Software stood out because its power management was user friendly, intelligent and could accommodate the requirements of our IT staff. In addition their solution included other beneficial IT functions such as Deployment, System Monitoring, Remote Management and Asset Management. With SyAM, System Administrators could schedule the times that machines should be powered up and down saving substantial power and money for the University. In addition SyAM technology qualified for the LADWP rebates covering its license costs so was a real win-win for the campus and for the environment.”

Go Green IT Energy Practices

BIOS:
For people who just can't bear to wait while their computers start up in the morning, change their "BIOS" settings that can set your computer to automatically turn on in the morning.

Recycling:
We are making sure that all departments are aware of various methods that we use now to dispose of E-Waste on campus, either by UCLA Facilities or authorized outside companies.

Shared Printers:
Switch from individual desktop printers to shared printers.

Printing:
Save paper by printing double -sided,using recycled paper and reusing scratch paper; shrinking printed documents to half-size, and skipping printing altogether by relying on e-mail and PDFs.

Energy Star:
Buying Energy Star products may not save enough money to justify junking working equipment, but for technology that needs replacing, Energy Star ratings equal savings on power bills.

Go to sleep:
Adjust computers to enter sleep mode faster than factory settings.

Clean up:
Keep computers' fans and internals clean to keep them cooling efficiently. Dust buildup on heat sinks will lead to overheating and damage to components.

Virtual servers:
Instead of buying new servers, IT can create virtual servers, multiple servers on one machine, to host many different applications and websites on a single physical machine.

The Solution

Over the last eight months as Shah has familiarized himself with the SyAM solution the solutions' advantages – both SyAM System Manager and Power Management Scheduler - have revealed their value and validated his initial recommendation to partner with SyAM.

A process, remarked Shah, made all the easier by SyAM's availability and dedication to helping him get up to speed quickly on its integrated solutions.

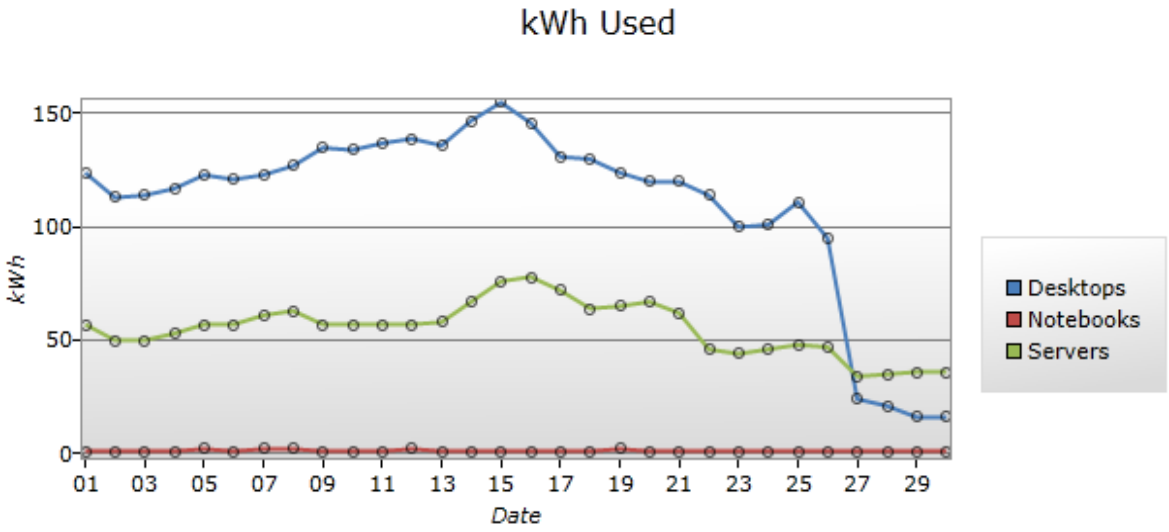
SyAM's Power Management Scheduler enables IT Administrators to create power policies and enforce them without any end user intervention. The Scheduler gives administrators the ability to schedule specific managed systems to remotely power on or off at user specified times, seven days a week. All settings can be made across a large network within a couple of hours, saving power and the associated costs.

"We now enjoy exceptional visibility into the usage of our department computers and also a really easy way to control them. And the reporting is great. Once you've set it up it's easy to add, manage and receive productive feedback on the status of new machines," said Shah. "For example, using SyAM reports we can, based on how much we're using and from which machines, easily calculate the cost of power and then calibrate that power draw in order to achieve even greater savings."

SyAM's System Management solution also enables Shah to extract details as well on each system in use.

"I can look at what software is on it, whether it's turned on or off, and all of our inventory statistics, such as type of computer, processor, hard drive, so on. If you don't know what you have and don't want to guess or spend cycles personally visiting and configuring each machine, it's useful to be able to collect that information which helps us to better align our environment for future initiatives, for example, around server virtualization," said Shah.

Based on current infrastructure – including PCs and servers – Shah estimates he's saving thousands of kilowatt hours per month on campus – a number that will fluctuate once more machines are added and placed into a prescribed power management schedule.



The Benefits and a Look Forward

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For Shah quantifying the value of SyAM to his DLAM team as well as the larger Go Green IT initiative has helped him to evangelize a simple to deploy and easy to use campus-wide energy solution.

“SyAM power management utility is set it and forget it kind of system, and I mean that in the most positive way possible. Once I had it up and running I had an overview of my entire system available in a single, comprehensive and interactive list. This enabled me to set up and easily manage power schedules, from shutting down machines in bulk, or individually based on theiruser’s requirements,” said Shah. “And, as a Software-as-a-Service (SaaS) based solution I can log into the management console from my web browser and find everything I need - a single pane of glass if you will - by which to manage our team’s power and system management requirements.”

While it’s perhaps unsurprising to learn that college campuses like UCLA are “going green” (after all, this is California we’re talking about, home to many eco-friendly enterprises), it’s a movement that begins, observes Shah, at his level and radiates out to his peers and the data centers (and PCs and servers) they manage cross-campus.

“I’ve spent a great deal of time reading case studies on how other schools, and even some private sector companies increase green awareness among employees and end users alike. At first the savings are modest; but, if everyone took notice of the energy savings available at their fingertips, and you multiplied that single gesture over and over again throughout your infrastructure, you could save hundreds of thousands of dollars per year on your energy and server cooling costs alone,” said Shah.

He ended our discussion on a personal note, but one that again articulated the value of starting out small but seeing value rapidly flourish.

“Here at UCLA, where we have an estimated 20,000 PCs on campus, where energy costs continue to rise and where we’re always looking for ways to reduce them. So, a dedicated, intuitive and responsive solution like Power Management solution from SyAM can enable those savings for us in the days, weeks, months and years ahead.”