CASE STUDY

Sandia National Laboratories

COMPANY

NAME: Sandia National Laboratories
HEADQUARTERS: Albuquerque, NM, USA
INDUSTRY: Science and engineering for national security
PRODUCTS AND SERVICES: US national security
REVENUE: $2.9 billion (2015)
EMPLOYEES: 10,000+
WEBSITE: sandia.gov

DATA CENTER ENVIRONMENT

For more than 60 years, Sandia has delivered essential science and technology to resolve the nation's most challenging security issues.

As a Federally Funded Research and Development Center (FFRDC), Sandia has the vision "to be the nation's premier science and engineering laboratory for national security and technology innovation." They have 3 data centers with 6,000, 27,000 and 30,000 square feet respectively as well as modeling tools when they began the project.

ASSESSING THE CHALLENGES

Sandia had been using manual calculations and meter readings combined with field verifications to track data centers. As its scale and complexity grew, Sandia's data centers sought an accurate charge-back model to track customer usages and keep tabs on long-term costs. For several years Dave Martinez, Engineering Program & Project Lead, Infrastructure Computing Services and the rest of the management team wanted a Data Center Infrastructure Management (DCIM) tool to improve the tracking of assets, power, perform trending and predictive analyses and ultimately cut down on both costs and manual labor. Their customers needed more transparency into their particular assets and power usage, and management needed a better cost model for those customers.

With several systems in place, Sandia experienced fragmented data and system-specific skill sets across its staff. So Martinez wanted one unified system for the entire staff to use, which would also enable knowledge transfer between employee transitions.

To ensure successful adoption, Martinez found it critical to engage his staff and get their buy-in with the DCIM tool. His goal was to "empower the team to be self-sufficient by giving them ownership" of the solution from the onset. Martinez indicated that "If they get too frustrated, they're not going to use the tool."

As a result, the key criteria for the chosen DCIM were:

- Quick to deploy
- Easy to learn and navigate for the Operations Center staff and admins
- Capable of showing results in short order to achieve a fast ROI

NLYTE GETS EVERYONE AT SANDIA ON THE SAME PAGE

From eight potential vendors, Martinez and his team narrowed the choices down to four after product demos and gave the finalists a chance to meet the aforementioned key criteria in Sandia's live environment.

NIyte was the only vendor that "performed the best and fit (Sandia's) needs" to win Sandia's approval.

As the tool was deployed, Martinez made sure that his team was involved every step of the way right from installation. The NIyte team trained Martinez's team from the get-go, a vital step to make them comfortable with the solution and gain the knowledge, skills and independence critical for future success.

Martinez's team quickly learned to "navigate Nlyte pretty easily with just a little training." As hundreds of people began using the tool to different degrees, the collective knowledge base was formed and became easily transferable.

Gathering the information on the assets and sensors in the data centers took time, but was time well spent as it gave Sandia a good picture of everything on the floor. As Martinez commented, "How would we trouble shoot if we didn't even know where the assets were?" The team now had visibility to each asset, down to its exact location within a room. They also gained branch circuit monitoring, right down to the rack. This transparency enabled the team to see trending, assets, power usage, and empowered predictive analysis. They could now answer the previously unanswerable: What would happen if the power was lost? How would a failure affect the data center? What would the addition of new equipment do to the surrounding area?

By automating the process, Nlyte significantly cut manual labor and associated costs. The built-in dashboards and reports in Nlyte eliminated hand calculations and field verification. Martinez explained, "We had electric meters on power mains coming in, but we had to go and read them. Now, we just turn on the (Nlyte) screen. We believe and trust what we see there. We save many, many man hours."

This kind of information also enables savings. "We're not predicting any more. We have live studies. We're turning metrics into dollars and cents. This puts our operational costs more in perspective. The more metrics we have on power and cooling usage, the more we can trim."

Sandia's customers are given access to their own information, and can see their own trending when adding equipment. When adding new customers, Sandia's management now has an up-to-date cost model for accurate chargebacks.

Sandia is very pleased with the tangible results they've achieved with the Nlyte solution, and "upper management like what they see." Sandia is also happy to share with its customers the added value the Nlyte solution brings, such as increased efficiency and reduced costs.

THE NLYTE SOLUTION

Sandia Labs is using a variety of Nlyte Enterprise and Nlyte Energy Optimizer features, with plans to use even more as Nlyte becomes the "go-to tool". Presently, they are using:

- Data Center Module: To view and manage all asset information
- Connection Manager: To trace power and data connection with the data center
- Floor Planner: To plan and manage the physical layout of the floors, room and assets within data centers
- Dashboard and Reporting: To access pre-defined dashboards along with the flexibility to create, deploy and maintain user-defined dashboards
- Intelligent Asset Allocation: To create and manage auto-allocation projects with Nlyte's patented Intelligent Asset Placement

GOING FORWARD WITH NLYTE

For the next phase of adoption, Sandia foresees using Nlyte Predict, working on including Nlyte Barcode, and adding Nlyte Integrator at a "later stage." Hundreds of people at Sandia already use Nlyte every day, ranging from "read only" to full permission.

"During this whole process, there's an open line of communication between Nlyte and Sandia, " Martinez added. "That's the way it should be"

"We're very pleased about the way everything has developed, how it's been deployed and the use of the Nlyte system. It's beyond what I thought it would be. It has definitely exceeded our expectations."

Given its DCIM-readiness using the Nlyte Dashboard and Reporting, Sandia is primed to tackle the upcoming challenges of DCOI (Data Center Optimization Initiative), a Federal mandate that Nlyte has helped other Federal clients with using its patented DCOI Dashboard.

FOR MORE INFORMATION

- Contact Us: **info@nlyte.com**
- Visit Us: **www.nlyte.com**

About Nlyte

Founded in 2004, Nlyte Software is recognized as the industry leading data center infrastructure management (**DCIM**) solution provider. Nlyte's DCIM provides unmatched functionality that supports all data center processes across the entire "dock to decom" lifecycle. With a 98% customer retention rate, Nlyte's DCIM solution is used by many of the world's largest and most sophisticated data centers, as well as many small and medium sized organizations. Customers can quickly deploy the Nlyte DCIM solution and begin to immediately enjoy reduced costs and increased efficiency across all data center processes. For more information, visit **www.nlyte.com** or follow **@nlyte** on Twitter.