PROJECT PROFILE

Nlyte Software

Nlyte Energy Optimizer
Energy Efficiency Through Server Consolidation

NLYTE REAL-TIME MONITORING HELPS CONSOLIDATE TO BLADE SERVERS AND SAVING ENERGY COSTS

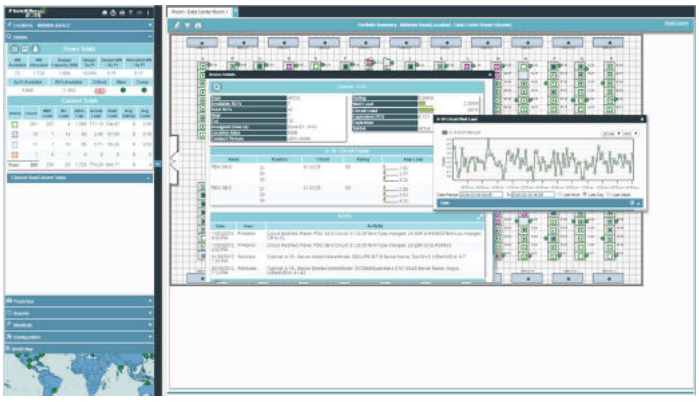
The customer, a Media/Information company, decided to consolidate their traditional servers into blade servers to conserve space, curb energy costs and avoid construction of a new facility. They also needed a faster, more efficient way to add assets to their data center without fear of overload. To accomplish these goals, the customer knew that real-time monitoring of circuits was essential to avoid down time.

> "The real-time alert from the solution notifies us within a minute when the circuit is overloaded...So my team can react as soon as possible to off-load some equipment or reset the breaker."

5	30,000 (2800 meters^2)	4.88 GWh in energy consumption, $586,570 (€450,000) in power costs, 2841 tons of CO_2	3
5,000	1		2.6 Months

Nlyte Energy Optimizer, a part of the Nlyte suite of data center solutions, is a software solution that helps all types of data centers, especially large environments, run at peak efficiency. It provides real-time information about all the critical systems in a data center -- both IT and Facilities systems -- in an easy-to-use format that empowers management to make great decisions based on facts, not guesses. Users get the most out of the equipment and space available, reduce energy and cooling consumption and proactively plan for future expansion. Nlyte Energy Optimizer's real-time branch circuit monitoring keeps customers constantly aware of the situation in their data centers.

The software generates reports on each circuit and alarms when thresholds are approached, so changes can be made before disaster strikes. This allows consolidation without overload.



This Room Overview enables users to see any combination of cabinet status, PDU distribution, alarms and thermographics in one screen.

The solution was chosen for its ability to monitor circuit usage in real time. Common practice in data centers that don't have realtime monitoring is to leave a large margin for error, known as overprovisioning, in case of spikes in demand. The customer determined that roughly 80% of the servers in their three data centers were only utilizing 10-15% of their CPU capacity.

As the computing load was transitioned to the more efficient blade servers, Nlyte Energy Optimizer's real-time monitoring allowed the customer to close this "safety gap" in compete confidence that thresholds would not be reached or exceeded.

The Portfolio Dashboard delivers a comprehensive set of metrics for a convenient single pane of glass view into the efficiency, capacity and performance status of the entire infrastructure.

As traditional servers transition onto blade servers an average consolidation ratio of 9 to 1 is achieved. At an average workload, a traditional server consumes 500 Watts of power versus about 2500 Watts per blade server. This means a 45% reduction in direct energy costs for the same amount of processing while increasing fault tolerance and performance through load balancing. With a typical PUE of 2.0, costs associated with cooling and other infrastructure support are also roughly halved. 1,243 traditional servers were consolidated onto 137 Blade servers. The resultant reduction in energy costs was over $500,000. Based on drawing power from a coal-fired base-load power plant, the reduction in carbon emissions from this project equates to 2,841 tons. The consolidation would not have been possible without Nlyte Energy Optimizer to constantly monitor the load.

In addition to this conservation of both space and power, introducing new assets became much easier as well. Instead of the time-consuming tasks of manually checking each cabinet load, then having to do calculations, which can take a week, only to produce outdated data, Nlyte Energy Optimizer software constantly and automatically monitors load so availability can be discovered in a matter of minutes.

The customer plans further blade server consolidation. With the Nlyte software solution, these changes will continue to run smoothly, helping make the data centers more efficient.

Quotes:

"If we have 1000 servers, maybe 80% are only using 10-15% of CPU capacity, while others run at about 60%. We would reduce the number of servers and increase utilization."

"It (energy efficiency) sounds good. If it saves money, it will be even better. My upper management will be glad to hear that."

The solution helps me make decisions quicker. I can tell whether I have capacity to support a new project. The solution tells me how much I'm using now, so I can tell (a project sponsor) how much I can support."

"If I don't have Nlyte, I would have to send my guy to each cabinet to check the current load; then we do our calculations. It can take a week. With Nlyte Energy Optimizer, we get results in 20-30 minutes."

Nlyte Software helps teams manage their hybrid infrastructure throughout their organization – from desktops,networks, and servers to IoT devices – across facilities, data centers, colocation, edge, and the cloud. Using Nlyte's monitoring, management, inventory, workflow, and analytics capabilities, organizations can automate how they manage their hybrid infrastructure to reduce costs, improve uptime, and ensure compliance with organizational policies.

Nlyte Software is part of Carrier Global Corporation, the leading global provider of healthy, safe, sustainable, intelligent building and cold chain solutions. For more information, visit or follow .

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