MANAGE IT ALL

TRELLIS™ ENTERPRISE SUCCESS STORIES

VERTIV.™

REDUCING DOWNTIME WITH REAL TIME NOTIFICATIONS AND DATA COLLECTION

A Data Center Site Engineer's Experience with *Trellis*™ Enterprise

As a Data Center Site Engineer, my primary responsibilities are power balancing and keeping the top of each rack in the data center at 77-78°F degrees.

My Top Concern

I am primarily concerned with managing space provisioning requests by validating the power capacity for those requests.

Every day I walk the data center and check the rack PDU data for power and cooling context for space planning. I use spreadsheets to manage those readings. Because of the manual nature of this process, I have trouble detecting unreliable hardware. I also find it challenging to report on power usage and understand power capacity during installation.

What I Need

I just want to see a more reliable report of power equipment so I can manage space requests.

What Happened

I implemented the Trellis™ Enterprise. It allows me to track and report on the health of facility critical devices and provides information on power, cooling and environmental conditions such as temperature, humidity, air flow and leak detection. The customizable notifications and threshold validation allow me to focus on active alarms that require immediate attention.

Now the time required to identify and resolve issues with critical infrastructure devices is reduced, increasing the availability of my data center.

- The Alarm Viewer shows a picture of over-all data center metrics.
- Viewing data points and alarms on the graphical floor allows me to identify areas of stranded capacity that are impacting the data center.
- Viewing all this data in real time enables me to find unreliable devices that use more power than planned.

Replacing my manual logging of capacity readings has saved me time and operational costs. In addition, I estimate the reduced risk of unplanned downtime due to real time data and alerts from *Trellis*™ Enterprise will save over $1 million in costs in the coming year.

I have been able to reallocate the savings from implementing *Trellis*™ Enterprise to upgrade power and cooling equipment for future expansion as well as execute predictive maintenance with fewer resources.

For more information visit https://www.vertivco.com/en-us/public-campaigns/data-that-works/

" Trellis™ Enterprise will save over $1 million in costs in the coming year. "

REDUCING OPERATIONS COSTS BY AUTOMATING POWER DATA COLLECTION

A Facilities Operations Manager's Experience with *Trellis*™ Enterprise

As a Manager of Facilities Operations, my primary responsibilities are to make sure that the electrical and cooling needs of my data centers are being met and to address problems before they impact IT.

My Top Concern and Challenges

I am primarily concerned with power and cooling capacity as well as uptime. I maintain the facilities equipment for over 100 racks, requiring significant man-hours (roughly $1,300 in personnel operational costs per day) to ensure the accuracy of my power and cooling capacity support.

Every day, I take manual readings from equipment, load the building automation system with data from contractors, chart power consumption by room, check rack PDU and server data. I use spreadsheets to manage all the data captured from each piece of equipment.

Because of the modular tracking method, I don't have a clear picture of the data center changes over time. I am unable to show upper management why I need a staff fully dedicated to the data center to monitor these devices.

What I Need

I just need to view power and cooling capacity calculations quickly and accurately. For ten years, I have struggled with this lack of visibility.

What Happened

I implemented the *Trellis*™ Enterprise. This allows me to view data and pull readings from devices as if I was standing in front of the user console in the data center. It helps me manage my devices such as setting thresholds and rebooting. Since implementing the *Trellis*™ Enterprise, I avoid surprises and outages with my equipment.

- The Device View dashboard enables me to view key data points quickly with real time updates.
- The Alarm Panel shows me any issues with each device in the past twenty-four hours and monitor any conditions that need to be addressed.
- The Configuration and Control tabs help me execute changes on devices from the convenience of my desk.

As a result, I calculated a 45% reduction in operational costs from automating the process of logging power capacity readings. With the extra time I have, I can focus on the capacity planning required for my facility.

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IMPROVED INVENTORY & SPACE MANAGEMENT

A Data Center IT Director's Experience with *Trellis*™ Enterprise

As a Data Center IT Director, my primary responsibilities are to establish colocations for new clients, while managing consumption costs and space within the data center.

My Top Concern and Challenges

I am primarily concerned with space management strategies for my expanding data centers and implementing asset changes in my data center.

Every day, I use a spreadsheet with the list of new colocation needs from clients. I manually compare this spreadsheet to my inventory spreadsheet to determine assets. I filter the inventory list for the racks that I am responsible for and view the assets individually to find available space for new colocations.

I need a tool to help make space and capacity planning decisions and manage lack of space. I need to track the changes in my assets and not be overloaded with facilities equipment I do not control.

What I Need

I want to effectively and efficiently manage the space in my area of the data center.

What Happened

I purchased *Trellis*™ Enterprise that includes a fine-grained authorization feature. This allows me to filter inventory to the space and racks on the floor that I am concerned with. I can group servers into colocation groups and give each data center operator I work with a selected group of clients to manage without affecting the other assets in the rack.

Now, I can better manage the projects in my area of the data center on time and within budget.

- Viewing only the assets under my control allows me to find the most efficient areas to place new colocation client servers.
- Grouping colocation assets together by client enables me to assign access to each client for my operators to manage.

As a result, I can predict placement for any number of assets and can visualize how space reservation will impact capacity for any given rack in my area of the data center.

What use to take two hours now takes 30 minutes with *Trellis*™ Enterprise. I more easily schedule expansions with the easy access to my assets. With the time saved, I now plan reservations and share that with my team without conflicts.

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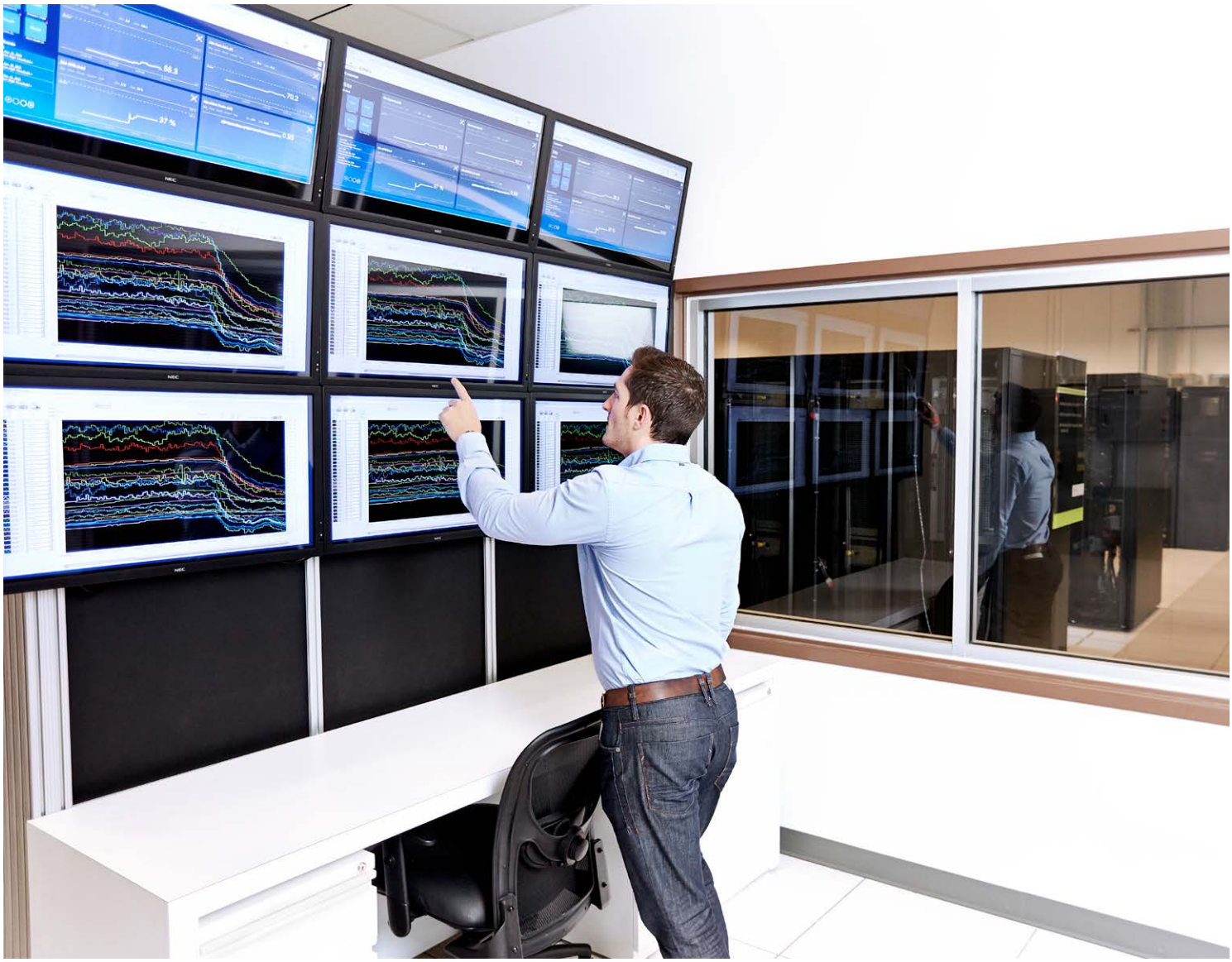
" What use to take two hours now takes 30 minutes with Trellis™ Enterprise. "



STREAMLINING INVENTORY MANAGEMENT

An IT Operator's Experience with *Trellis*™ Enterprise

As an IT Operator, my primary responsibilities are maintaining assets, tracking connections and maintaining a log of reservations and assets.

My Top Concern and Challenges

I am primarily concerned with tracking power and data connections, verifying assets and ensuring there is room for growth in the data center for future projects.

I have an extensive to-do list for making updates to existing equipment or installing new ones. I am required to look up devices and find where they are located. However, equipment is often located in a different area or space from the information I have. This results in a tedious, manual search that ultimately impacts my ability to complete tasks in a timely manner. In total, managing the inventory in such an inefficient way takes me about one week out of each month.

What I Need

I need an easy way to see an accurate depiction and location of my assets at the rack level. For four years, I have not had quick access to accurate information which causes challenges when I need to plan future projects.

What Happened

I started using Trellis™ Enterprise — a single repository for tracking my data center assets. It has finally allowed me to get a graphical snapshot of all my assets and their locations. I can quickly view power data while verifying upstream and downstream connections. I can also use the predictive tools to accurately forecast the impact of changes before they occur.

- Inventory search enables me to find assets anywhere in the data center via multiple search criteria.
- Graphical views help me visualize where my assets are located.
- Connection views let me view upstream and downstream power connections and all data connections on a device.
- The forecasting tools help me plan for growth.

Since implementing *Trellis*™ Enterprise, I have confidence in the accuracy of my data. I don't have to spend time on labor-intensive audits or keep up with multiple spreadsheets. I spend less time tracking down missing or misplaced assets. With the time I have saved, I can focus my efforts on re-cabling, replacing obsolete equipment and planning for expansions.

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REALIZING ENERGY COST SAVINGS WITH EFFICIENT THERMAL MANAGEMENT

A Facilities Manager's Experience with *Trellis*™ Enterprise

As Facilities Manager, my primary responsibilities are making sure that the facility stays within my data center's set cooling capacity factor (CCF) and maximizing cooling capacity while anticipating future needs.

My Top Concern and Challenges

I am primarily concerned with eliminating cold and hot spots in the data center. Every day I verify that my equipment is providing enough cooling capacity to the data center, but also operating efficiently and not over cooling.

What I Need

I need a way to easily see how well my equipment is performing. I need to visualize temperatures throughout my facility so I can see where my hot and cold spots are. I need accurate temperature information so I know when to turn equipment off or divert the cooling to other areas.

I would rather use existing equipment more efficiently than add costly new equipment. In the past I've had to make decisions on whether or not to add equipment when I didn't have the best information. I need to visualize the complex thermal interactions in my data center so I can make decisions in the short term while planning for when I will run out of cooling (zero-day predictor).

What Happened

I implemented *Trellis*™ Enterprise to help me manage my thermal data. This tool visually depicts cold spots, allowing me to make decisions on equipment use and efficiency by managing the cooling output. Now, I can easily see where equipment is over cooling and take action.

- The visualizations give me actionable data that I use to document trends, eliminate cold spots and use existing equipment more efficiently.
- The forecasting tools help me plan when new equipment is truly required.
- Quick analysis of complex thermal interactions enables me to have a better grasp on my zero-day predictor.

Eliminating cold spots and using existing equipment more effectively helped me lower energy costs and realize a measurable savings. In addition, the confidence I have in my data means I can work more productively. With the time saved, I am now planning for additional efficiency gains, like increasing my data center temperature — which could result in up to a 4% operational savings for every degree Celsius.

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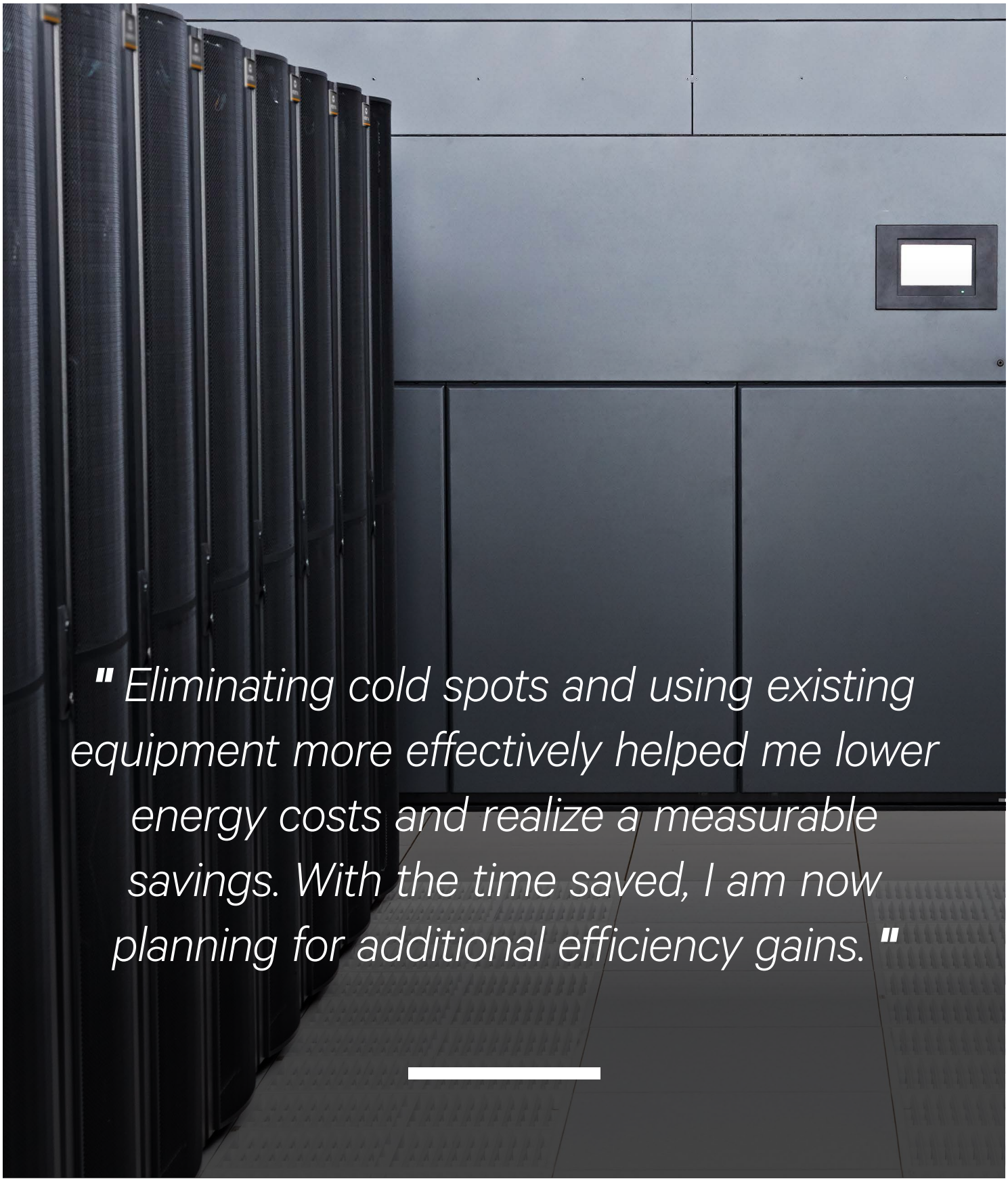
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