GRAPHICAL NETWORKS

Liberty University

Case Study

Overview
Information-rich visualization increases efficiency, reduces workload

Liberty University, located in Lynchburg, Virginia - the world's largest Christian university - needed a way to visualize and document their data centers: they wanted to quickly see what they had, plan out capacity and expansion, work collaboratively, and replace the inefficient tools (such as spreadsheets) that they had been using for documentation.

As a small core team would be using the software, they needed a solution that didn't require a time-consuming learning curve but which would still be powerful enough so they could visualize three data centers and get a bird's eye view of their data center rooms to a worm's eye view of the individual racks and all the way down to the device ports. They wanted to have the ability to allow numerous stakeholders, beyond just the immediate team, to access their data center diagrams as-needed, and set up permission levels for users, with access controls.

netTerrain was selected for its web visualization and documentation capabilities, power monitoring, usability, user permission levels, and built-in collaboration capabilities. Implementation was straightforward and the team was able to start documenting and visualizing their data centers right away.

Today, the team relies on netTerrain to find out what's in their data centers, plan for capacity and space, and reduce time and money for a more efficient data center.

Before netTerrain
Time-consuming processes, difficult collaboration, increased costs

The Liberty team lacked a way to visualize their three data centers, an equipment room dispersed across their campus, and a colocation data center hours away. They relied on existing tools for documentation, but the tools were limited and got in the way of the work they needed to do. While some data was in SharePoint or in a media Wiki, and occasionally Visio for diagrams, they didn't have a way to truly visualize and document their data centers.

They had been using Excel to document the servers, rack units, and connections to PDU outlets, and switches they had. Mostly, they used Excel for rack elevations and cable connections. Though they had serial numbers documented for most devices, they didn't have anything that would be considered true "inventory" data. They found that, even though Excel worked, it was a pain: searching for things in the network was a tedious task. Collaborating with colleagues was cumbersome as two people couldn't edit a spreadsheet at the same time.

The addition of an auxiliary colocation data center - over two hours away - created more headaches: anytime the team needed to know what was out there, they had to drive out to the site and physically see it.

Goal

Improve efficiency with information-rich, and collaborative, visualization

The team wanted to visualize their data centers and have current documentation that would be information-rich.

They aimed to:

• reduce time and money spent on having team members drive to various sites to physically see what was there

• efficiently plan out new purchases by being able to see what was needed, as a team, and plot out different scenarios

• improve coordination with other teams through better visualization of the data center and provide various stakeholders, such as admins for other teams, who didn't deal with the data center on a daily basis, with a way to visualize the documentation

• document and have information quickly accessible about important items such as warranty status, support contracts, etc for each device

Challenge

Powerful software that could work for a small team but scale up as needed

As they had a team of five users, who would be using netTerrain regularly, they needed software that would be within their allotted funds, help them achieve their goals, and be user-friendly enough so that there wouldn't be a significant learning curve.

User-friendly couldn't mean software that was too hard and which wouldn't, ultimately, help them accomplish their goals: they needed software that could visualize and document a high level of detail, give them the ability to create and run custom reports, and offer customizations such as color coding based on how many rack units are being used or be able to set peak power usage per device.

Solution
Software with robust visualization, unlimited licenses, and minimal learning curve

netTerrain was selected as the software that would help them achieve their goals for the following key reasons:

• user-friendly design eliminated a huge learning curve that would slow down progress and ROI

• eight permission levels that you can assign different user roles, enabled the team to use the software while also being able to loop in other stakeholders and assign them varying permissions such as "read-only"

• powerful visualization of data centers and environmental data that is visually displayed on diagrams - for example: if they had ten temperature sensors in a room, they could display that data on a netTerrain diagram and also see where that sensor is in the room

• accessible from any modern web browser, making it easy to for multiple users to work together and from various sites
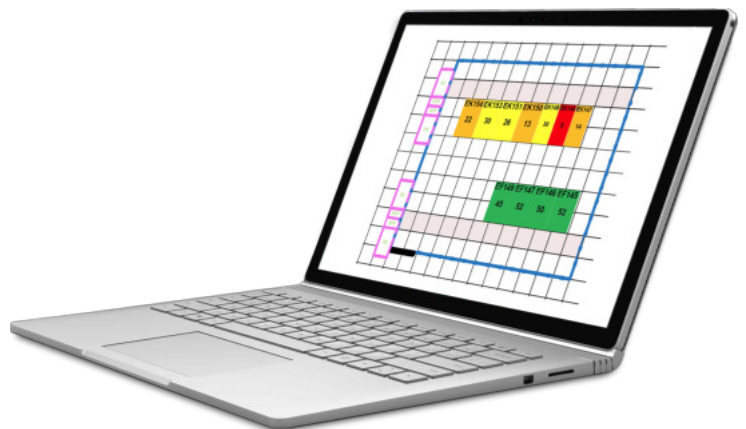
Implementation
Usable software and on-site training made getting started a breeze

The team elected to use Graphical Networks' optional professional services option for implementation and had on-site training with a Graphical Networks subject matter expert who helped them set up the server.

After installing netTerrain quickly, the team was able to start visualizing and documenting their data centers immediately.

Getting the custom reports they needed was easy. For issues such as devices getting detached from their rack units, as an example, they were able to easily create custom reports of what, exactly, got detached so that they could quickly put devices back where they were supposed to be.

Results
Data centers visualized and documented, time and money saved, workload reduced

Liberty's core team of five now uses netTerrain to quickly see what's in their three data centers and auxiliary sites, accurately plan out new purchases and configurations, and work collaboratively. They've successfully reduced manpower hours, increased efficiency, and saved time.

When they need to know what they have or where it is, they no longer have to drive around campus or take the long drive to their colocation site: they can simply log in to netTerrain and see the site with a few clicks. Searching for information is no longer a tedious task, but something that takes seconds.

They can plan for growth and change as a team and plot out different scenarios - and get the reports they need, created for their exact specifications, easily.

"It's definitely reduced man hours, trying to maintain spreadsheets, and having to drive over across campus to look at something instead of just pulling up our browser. It certainly has changed my work life. It's an excellent DCIM solution."

- David Ehrman
System Administrator
Liberty University

Learn More

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