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Getting clever with cable management

DATA CENTER cable management is a complex task. Often overlooked and neglected over time, improper cable management can wreak havoc across the entire enterprise and increase downtime. Poor data center cable management practices can result in "spaghetti" cabinets, difficult equipment installations, extended periods of troubleshooting and maintenance, and unsafe environments due to restricted airflow.

Tracking cabling in the data center with Excel spreadsheets and Visio diagrams no longer gets the job done today as sites grow, rack densities increase, and multi-hop connections introduce documentation complexity. Many organizations are deploying Data Center Infrastructure Management (DCIM) software to address the key challenges of data center cable management.

While the initial design of the network or structured cabling infrastructure could be documented in advance by contractors, ongoing documentation of patching as a result of moves, adds, changes could prove challenging. DCIM ensures continued accuracy of the cable plant by allowing you to document the initial design as well as the multitude of ongoing changes to enable real-time transparency of physical network/patch port capacity at every cabinet in the white space.

Poor documentation leads to difficulties planning, provisioning and maintaining equipment and troubleshooting connectivity issues. With a database of available and used patch or network switch port capacity in every rack, DCIM software makes it easy to search for capacity, plan rollouts, create work orders, provision equipment, and document patch cable installations down to the port level. A database driven tool with a web-front end allows anyone to easily view entire circuits and every hop to every device in between, down to individual physical ports on every device. You can even visualize circuit routes in 3D between all devices in an entire room.

Accurately measuring cable lengths before installation keeps the data center free of loose cables and reduces wasted cable, but often involves a time-consuming process of walking the data center floor with a tape measure. With CAD-level accuracy, DCIM software automatically measures all routes to ensure correct cable lengths are installed, avoiding rework or downtime when changes are implemented.

The team responsible for the equipment and cable installation may be different than the team who plans infrastructure deployments, and insufficient instructions in the build sheet can lead to incorrect installations and connections.

DCIM software can radically simplify data center cable management by automatically validating the compatibility of your planned connections before allowing you to make a change. DCIM software can also provide clear work orders with cabinet elevation, equipment specifications pulled from the software's database, and cabling instructions to ensure that the work is done accurately the first time.

With DCIM software, dashboards, reports, and what-if analysis are readily available, helping you plan for the future by seeing the impact of planned additions and decommissions on connectivity capacity.

Overcome the challenges of data center cabling with best practices and a modern DCIM solution, and you'll be well on your way to driving sustainable behaviors that foster precise and accurate cable planning, installation, and management.