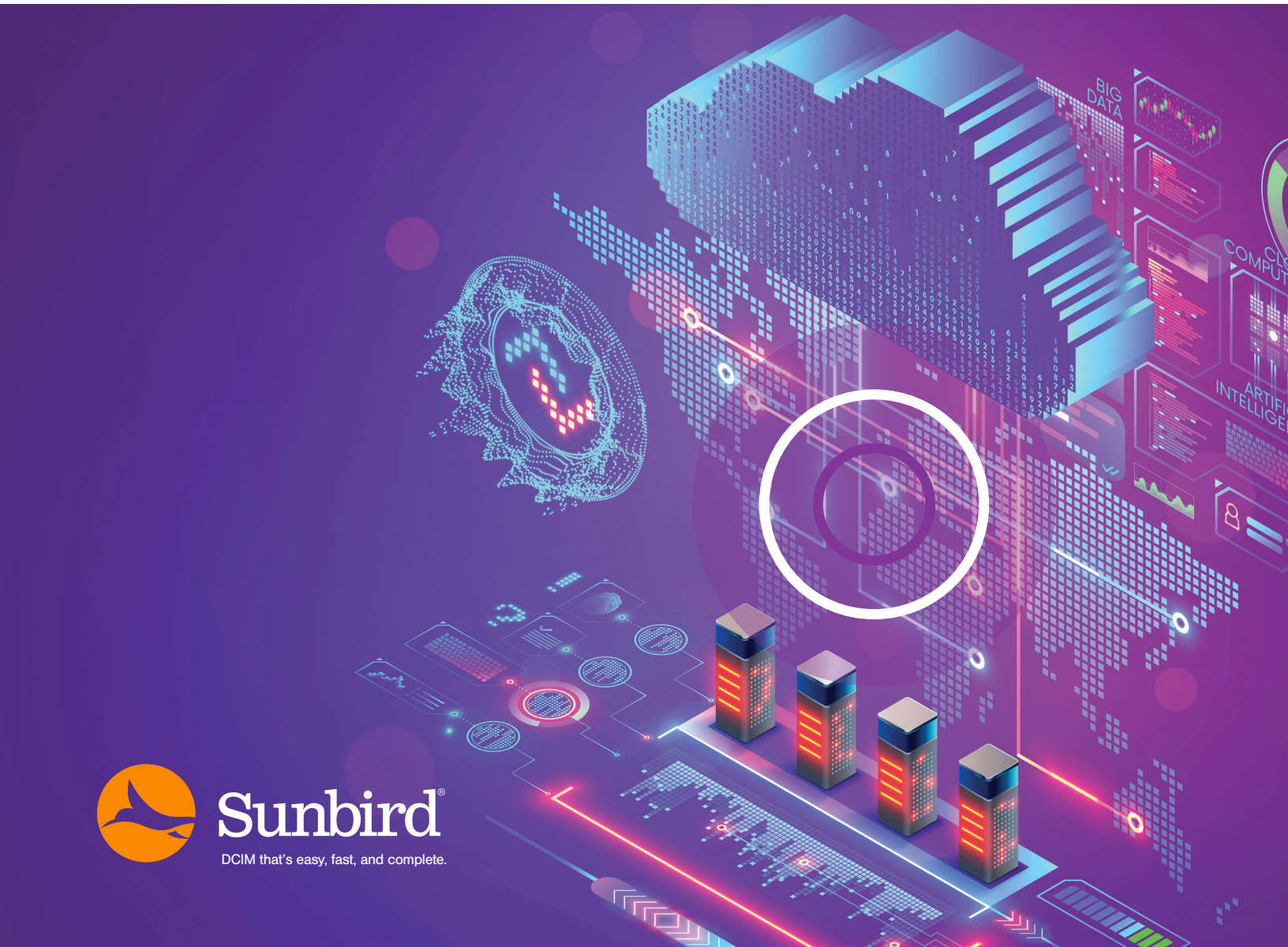
EBOOK

10 Best Practices

for MDF/IDF Closet Management



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DCIM that's easy, fast, and complete.

Introduction

Main Distribution Frames (MDF) and Intermediate Distribution Frames (IDF) are integral components of modern data communication networks.

Buildings or campus facilities have one or more MDFs which are the demarcation points where public or private telecommunication networks interconnect with the internal network. The MDF then connects to any number of IDFs in the building, and the devices in those IDFs connect to end devices such as workstations.

As data centers become more decentralized, MDF/IDF closets are now elevated to mission-critical status. However, they are often overlooked and mismanaged when compared to more traditional data center sites.

Common challenges of managing remote sites include having no visibility into equipment inventory and configuration, a lack of understanding of rack capacity, inaccurate work orders for technicians performing moves, adds, and changes, the inability to monitor site health and security, and having siloed tools and teams that don't communicate.

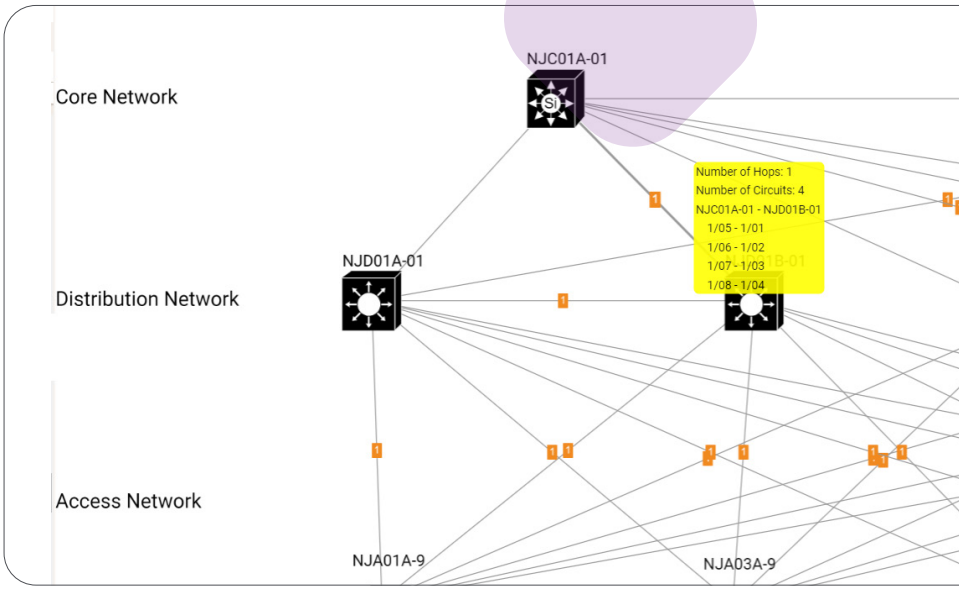
Fortunately, there is a path forward to simplify and centralize the management of your MDF/IDF estate. The key is to have the right tools and processes in place that allow you to monitor and manage all your global sites in a single pane of glass.

In this eBook, we've compiled the top ten best practices for MDF/IDF closet management that we've learned from our customers. Follow these guidelines set by some of the most successful data center professionals in the world, and you will improve uptime, efficiency, and productivity across your entire IT environment.

Accurately document the network

#1

MDF/IDF closets contain a lot of ports, cabling, and connections that are often not discoverable. When the physical network infrastructure is mismanaged, you can end up with cable spaghetti and spiderwebs that impede troubleshooting, make it difficult to move or install equipment, cause unsafe operating environments, and disrupt airflow.



Poor documentation also leads to inefficient capacity utilization, difficulty in planning and providing instructions to technicians, and increased costs for unnecessary cabling and hardware.

For accurate network documentation, both processes and tools need to be in place. Outdated tools like Excel and Visio currently used by network teams are manual and error-prone. Instead, visualize all your connections of both active and passive (i.e., structured cabling and panels) components across all your sites with network diagrams that are automatically generated based on your existing connection and circuit information with connectivity and patch management features found in modern DCIM tools.

DCIM software enables you to see your entire network in a single pane of glass with a high level of detail and customization such as color-coding, filtering, and tiered views based on your network attributes. You can even track the connections and structured cabling that connect the MDF/IDFs to the rest of the network. With automatic and accurate network diagrams, you can boost productivity by reducing time spent troubleshooting, planning, and maintaining manual diagrams.

Remotely visualize racks, devices, and cabling

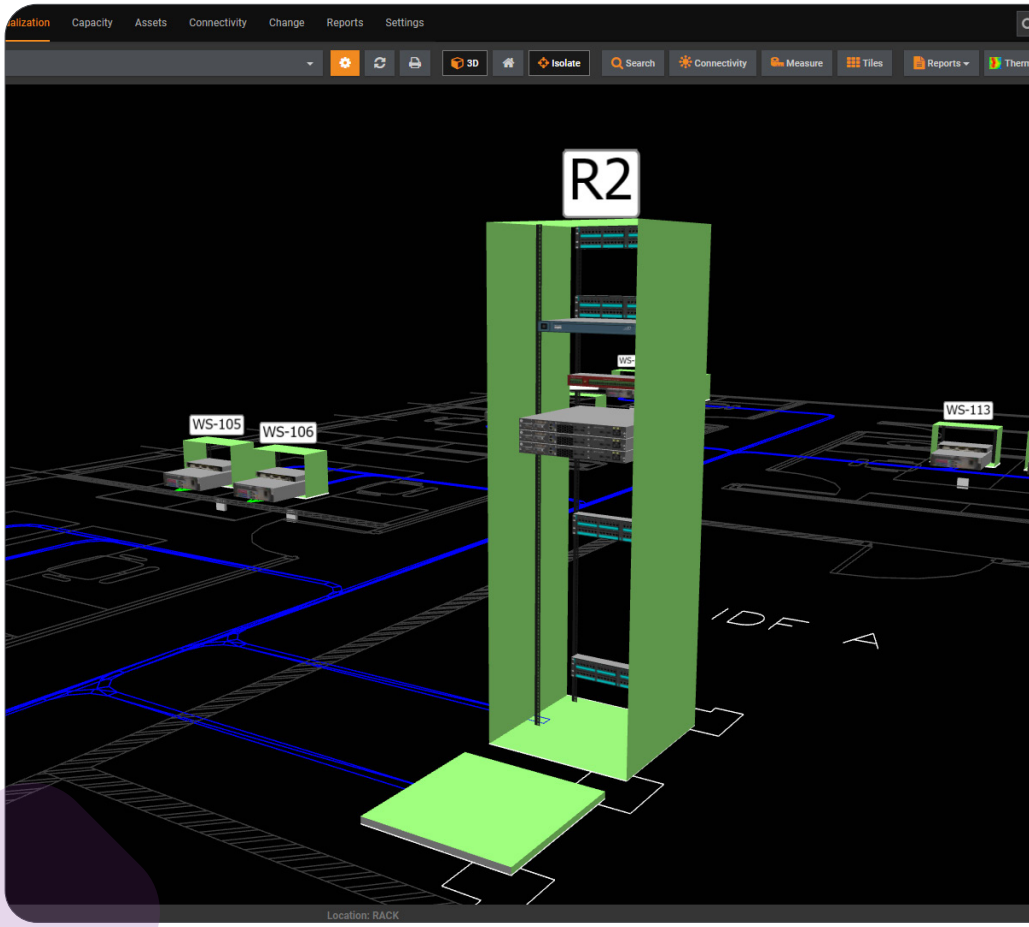
#2

With MDF/IDF closets, it is important to know what equipment you have, where it is located, how it is connected, and where you have capacity. This can be a challenge when you're managing hundreds or even thousands of individual remote sites.

A 3D "digital twin" of all your sites dramatically simplifies infrastructure management by enabling you to remotely explore and understand a real-time model of any site including the assets, power, environment, and connectivity. This allows for faster troubleshooting and smarter management that's even better than physically being there.

With 3D visualizations, you can see your rack contents and panel placements (i.e., above the rack) better than if you were standing in front of them. High-fidelity images of each asset with automatically rendered rack elevation diagrams provide a 3D replica down to the port level and to scale. You can also visualize the port-to-port physical connectivity of your devices to simplify troubleshooting and capacity planning.

Plus, you can overlay the live measured readings from your power and environmental sensors on your visualizations to instantly understand the health status of any site without leaving your desk.



Track the right KPIs and share reports

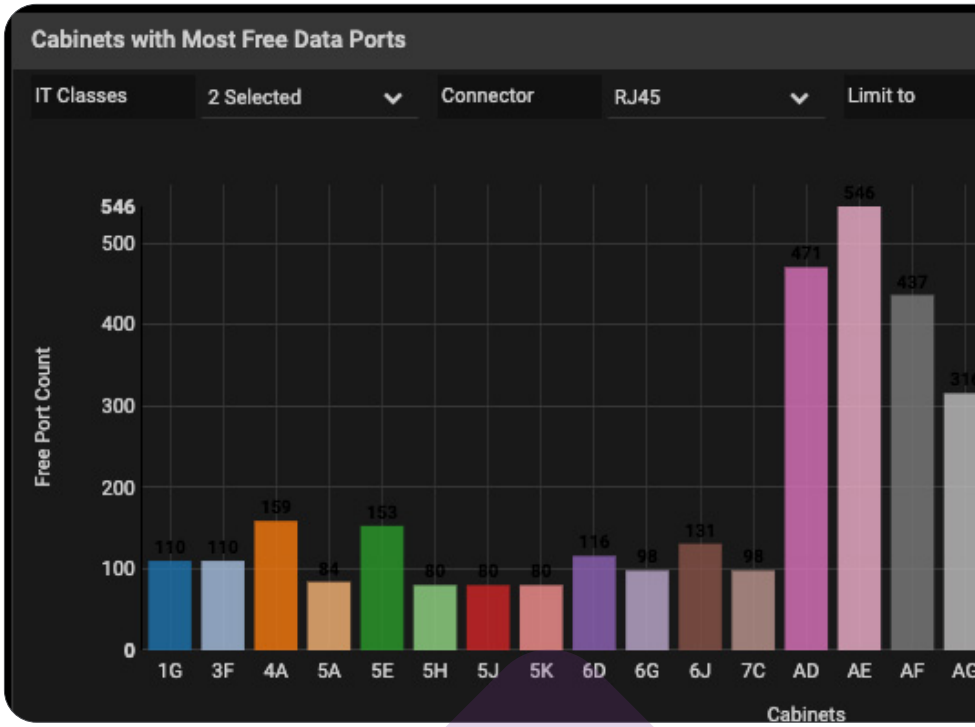
#3

Performance and health visibility and transparency is critical to managing MDF/IDF closets. It is common for the details about them to be maintained in siloed tools that are used by the network team and not shared with other functional teams.

KPIs and metrics should be democratized via modern DCIM software with business intelligence dashboards, reports, and visual analytics that enable a centralized view of all the physical infrastructure resources and capacities across your entire enterprise. Then, all teams can understand, at a glance, the reports that are most important to them such as the real-time status of any site's health, capacity, inventory, and productivity.

KPIs you should track include available capacity of key resources (i.e., space, power, cooling, and data/power port connections), energy cost, temperature per rack, power redundancy per asset, and data ports usage per connector type, VLAN/grouping, protocol, data rate, and media.

Consider creating and sharing personalized dashboards to drive data-driven collaboration across functional teams. Leverage a solution that can automatically generate and email reports on a recurring basis to keep all stakeholders aware of the latest information.



Maintain an accurate inventory of assets, parts, and spares

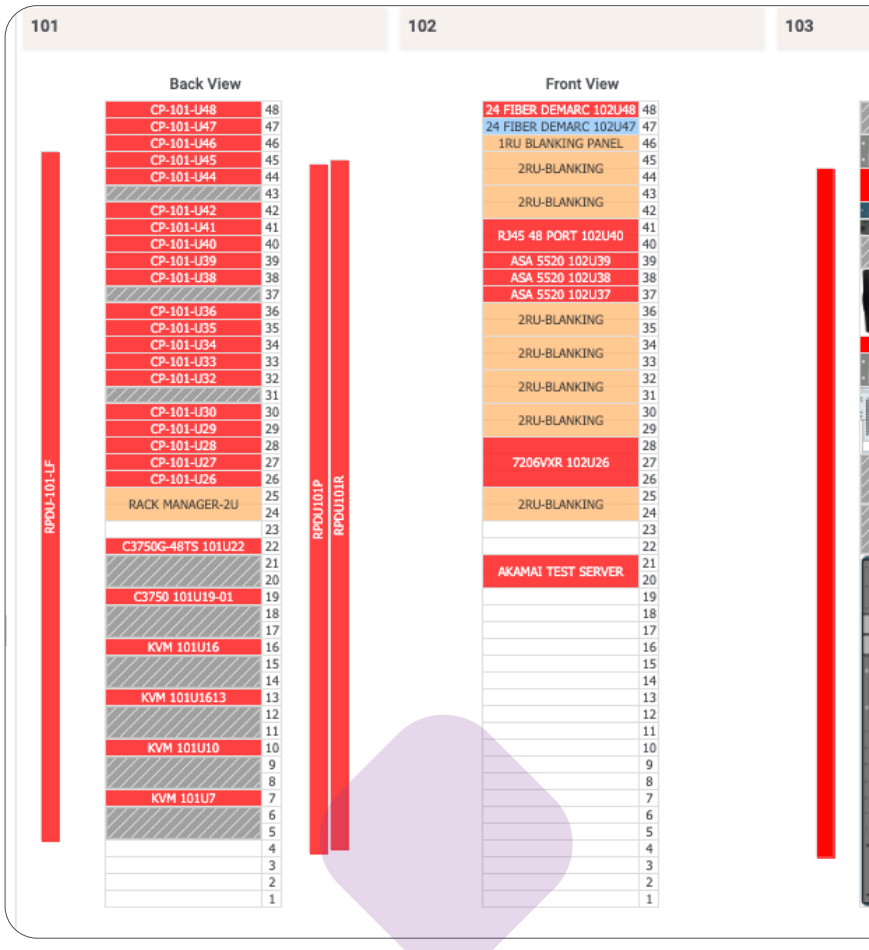
#4

The number of IT assets, supporting infrastructure assets, parts, and spares in today's data centers with many remote IDF closets can be staggeringly high. However, everything must be tracked and managed to ensure successful deployments, better manage the lifecycle of equipment, and know the relationships and dependencies of all data center infrastructure.

Legacy management tools like Excel and Visio are time-consuming, inaccurate, and should not be used to manage the complex asset inventories of your data center and remote sites.

DCIM software with complete asset management capabilities is a must-have for real-time views across your entire footprint including equipment in racks like UPSs, servers, storage, networking equipment, rack PDUs, patch panels, and even applications. Key information like make, model, dimensions, weight, serial number, asset tag, location, RU position, battery life, maintenance, and configuration can be easily tracked. Plus, custom fields allow you to track anything else that it is important to your organization.

You should also track parts and spares like hard drives, cards, memory modules, power supplies, and patch cables. With this information, you can keep track of inventory levels to know if you have enough parts in stock for new deployments or spares on hand to quickly repair or maintain equipment.



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