Picture
perfect

Herman Chan of Sunbird Software explores why data centre infrastructure management (DCIM) dashboards are critical to creating a complete picture

▶ With the jumble of different charts and graphs you already have for managing your data centres, you might think the last thing you need is yet another dashboard. But that's where DCIM makes the difference. A useful DCIM solution combines a large volume of data from multiple, disparate sources into a single pane of glass view. You then are able to not only analyse this data but also act on it within the same user interface.

SEEING IS BELIEVING
Enabled by DCIM dashboards, everyone from data centre managers to facilities and IT group members to C-level executives can make smarter decisions and take data driven actions to achieve their data centre objectives.

Your DCIM key performance indicators (KPIs) will vary based on your optimisation goals, but this data generally falls into one of the following categories:

• Asset inventory
What do you have? How much do you have? Example metrics include the number of items you have by type – cabinets, rack PDUs, floor PDUs, UPSs – and, by status, the number of items due for maintenance and the number of items added per week.

• Power
How much is being consumed? How much is available? Example metrics include PUE, actual versus budgeted power capacity and average active power by aisle or rack.
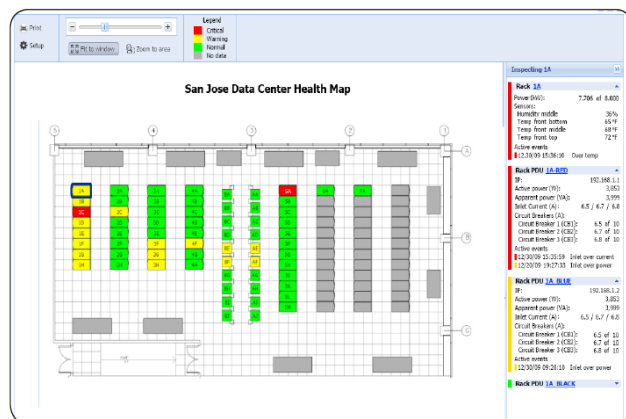
• Environment/cooling
Are you managing hot spots? Are you over-cooling? Is your environment adequate for your equipment? Example metrics include average inlet temperature, average inlet humidity, actual versus budgeted cooling capacity, and cooling conformance with industry or manufacturer standards.

• Space
How much do you have? How much are you using? Is the space contiguous? Example metrics include the number of used versus open RUs, the weight capacity of each rack, the number of contiguous RUs per aisle and rack, and the number of RUs available by rail (front, back, or both).
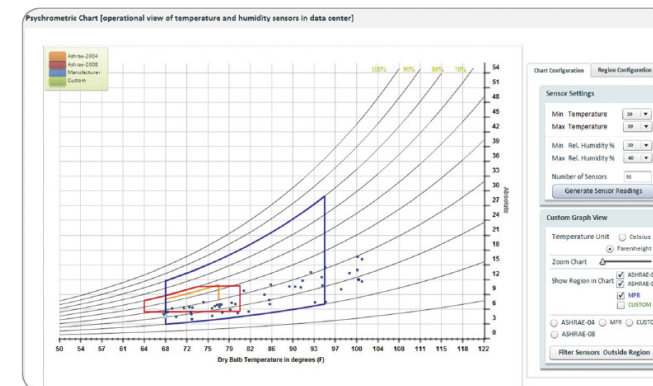
• Connectivity
How many connections are available? How many are in use? Example metrics include used versus available network data ports by connector type, data connectors in use, and items by number of connected power supplies.

HELP NOT HINDER
Traditional means of managing your data centres, like spreadsheets and homegrown systems, can hinder your efforts to make meaningful, cross-category connections among your data.

Such methods might provide metrics, but typically only as single snapshots in time

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and often in complete isolation. Manually collecting and analysing data from these disparate sources can be time and resource intensive, keeping you from quickly transforming the data into information.

INFORMATION INTO INSIGHTS
What other advantages do DCIM software dashboards have over their manual counterparts?

Besides handling data from various sources, DCIM software enables storage of data over years, not just hours or days. So, most DCIM dashboards include widgets that can display granular data trended over long periods of time. If you want to know when you will run out of power, a gauge widget measuring consumption over a few days will be minimally helpful. Conversely, a capacity forecast widget that charts your actual consumption rate over years and
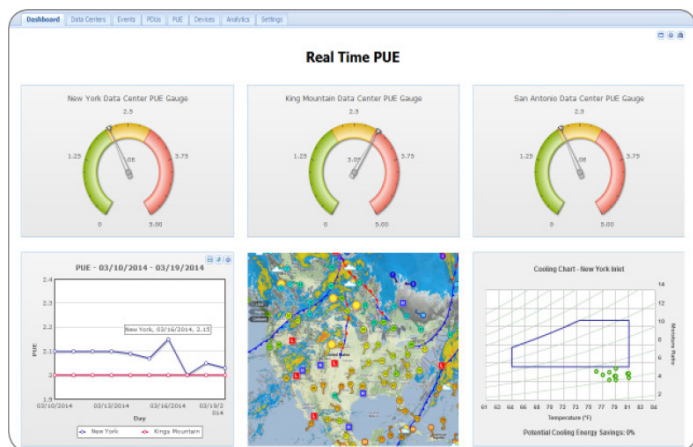
creates a trend line is more useful because it takes into account seasonal changes and aberrations. Using these widgets enables you to forecast across the categories of data with greater precision so you can minimise downtime and other disruptions, as well as plan for future growth.

A complete view of your data centre operations and health in real time is difficult enough when limited to a single site. If you face the complex challenge of working across multiple locations, then maintaining separate DCIM dashboards for different locations and purposes may help you monitor the state of your data centres. For example, you may find it useful to view metrics by a specific site and to drill down to that site's floors or even rooms. Likewise, a dashboard aimed at optimising energy consumption by reducing overprovisioning might combine asset inventory and physical power and network connectivity metrics.

CUSTOM FRAMING

Of course, DCIM dashboards only add value when they're used. Simple yet effective practices for driving user adoption and maximising the usefulness of your

dashboards include:
• Enabling users to configure their own dashboards. Many DCIM tools ship with preset dashboards that may be adequate while you're learning the interface. However, customisation unlocks the true potential of dashboards. Providing users with the flexibility to frame the data as they see fit helps them focus on the most relevant information and decreases the time to smarter decision making.

• Investigating alternative ways to slice your data. The large data pool available from using DCIM software presents opportunities to explore your data in fresh ways. Different widgets and visualisations can augment your understanding and lead to new discoveries about your data centres. A DCIM solution provider invested in your success will uncover the lesser known metrics available or will expand functionality to address your needs.

• Sharing dashboards with different users. Some DCIM solutions let you share data via dashboards, a useful feature when you need to provide at-a-glance insights to your team, stakeholders, or executives. Allowing others to view your dashboards also promotes transparency, minimises the potential for miscommunication, and bolsters collaboration.

When configured with an eye toward usefulness, DCIM dashboards enable you to explore trends and glean invaluable information from your data. More

importantly, this information transforms into trustworthy analytic insights – as long as the data is accurate.

GOOD DATA

Even in the case of DCIM data, the adage of 'garbage in, garbage out' still applies. Dashboards are only as trustworthy as the data used to produce them, and missing or imprecise data caused by asset moves, adds, or changes or by hardware, network, or power failures, decreases the accuracy of your forecasts. Moreover, storing useless data creates unnecessary risks and costs.

Preventive maintenance and testing comprise the first line of defence against data loss in many facilities. However, DCIM software, combined with the appropriate hardware, also can address this concern. DCIM can augment polling options for some intelligent PDUs for time-synced, down to the second meter readings saved to internal memory, so data can be stored and retrieved in case of connectivity failure. Additionally, some DCIM solutions provide reports that simulate failover, so you can determine if your data centres can handle failover conditions without impacting equipment.

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COMPLETE PICTURE

Data is a data centre professional's greatest asset. Yet few have the time or inclination to explore configuring dashboards to their needs. Instead, many settle for dashboards that look good at first glance but lack truly

useful insights.

Rather than accepting sub-optimal charts and graphs, consider partnering with a DCIM solution provider who understands your unique data challenges. When used to their full advantage, DCIM software dashboards can bring together data points from your disparate systems to create a complete picture of your data centre, enhancing your ability to deploy resources to capacity forecasting, energy management, or other areas where – based on your data – you'll know they will have the most impact in your data centres. ❑

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