Reducing Risk and Increasing Efficiency in Academia Server Room using DCIM software

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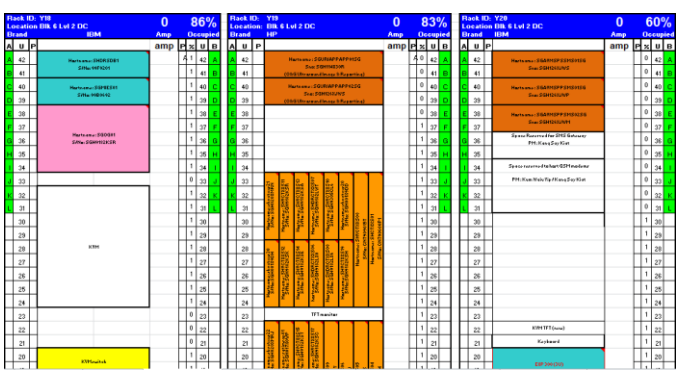
Aim: For the new Academia Building on SGH campus that's opening in July 2013, our aim is to implement a system that will reduce the risks and challenges typically associated with operating a Server Room / Data Centre.

Methodology: A risk analysis was done to identify and mitigate the risks in 4 major areas - environmental, operations, capacity planning and change management. The action taken was to implement an intelligent software tool called DCIM (Data Centre Infrastructure Management).

4 Risks

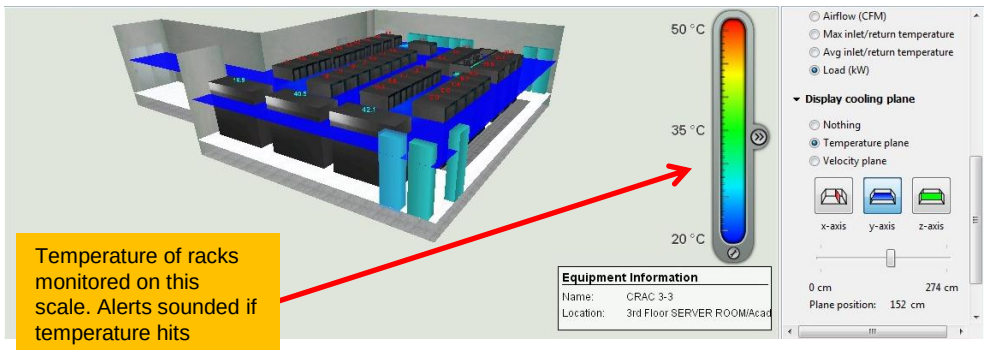
- Lack comprehensive and real-time monitoring of heat, power and humidity
- Inefficient and error-prone way of monitoring all events
- Inaccurate and non-optimal way for capacity planning, power requirements planning and rack allocation
- Inefficient and manual way for tracking movements and changes of assets in Data Centre using Excel-based tools

Paper-based recording and planning for power requirements



Manual entry is required for capacity planning and change management using this Excel-based tool

Environment

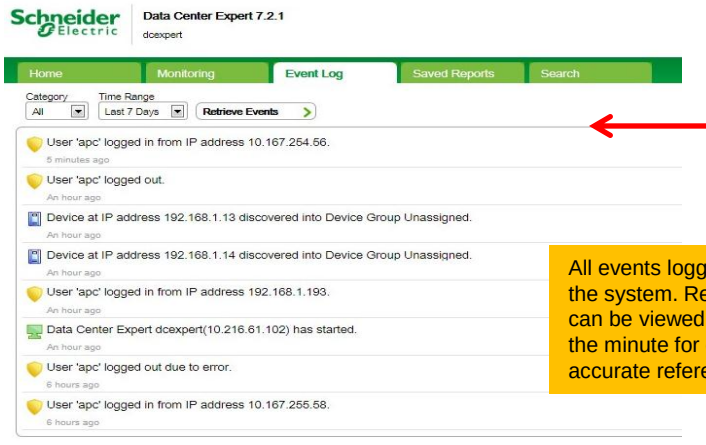


Temperature of racks monitored on this scale. Alerts sounded if temperature hits amber/red area

Real-time monitoring of Server Room environment down to rack level. Alerts are sent as early warnings

- Faster response to power overloading and overheating
- Reduce risk of power trips

Operations

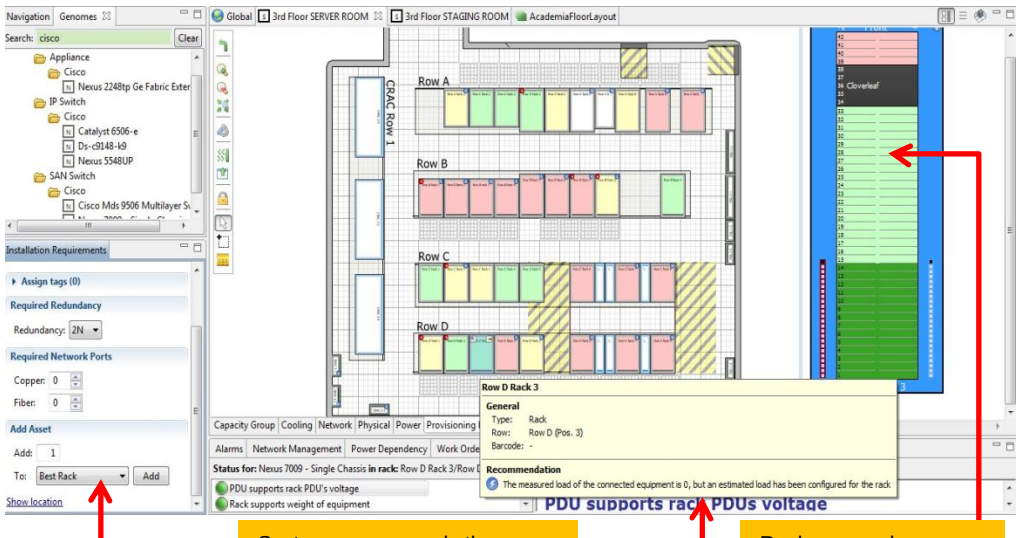


All events logged into the system. Records can be viewed up to the minute for easy and accurate reference

Integrated monitoring of all events through a unified view:

- Reduce human errors
- Detects and reduce risk of unauthorized actions
- Improves efficiency
- Reduce workload

Capacity Planning



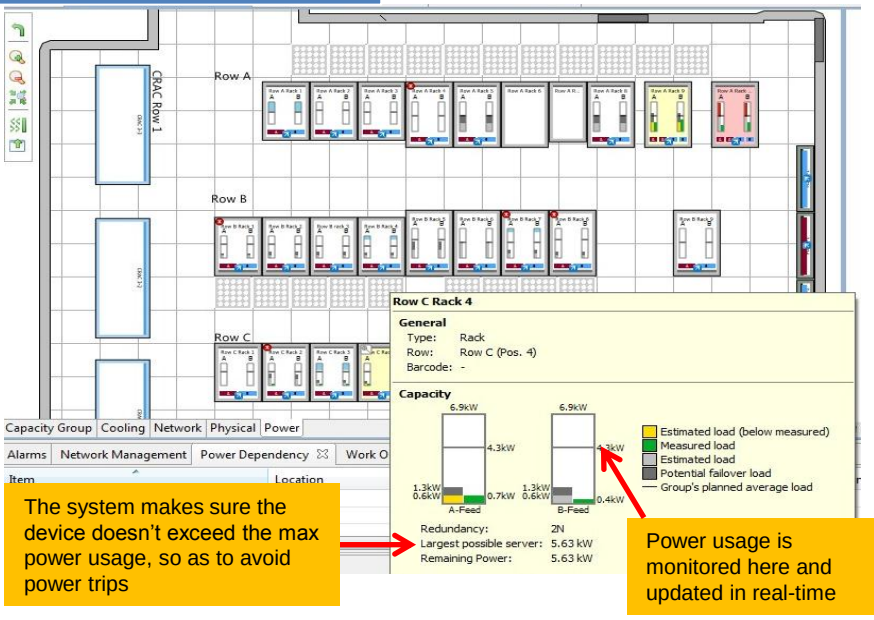
System recommends the row and position on rack to assign device

Rack usage shown here. Empty racks can be easily identified

Plan & allocate intelligently & optimally :

- Avoids unplanned downtime
- Reduce space wastage
- Achieve cost efficiency
- Easier maintenance
- Enables informed decision-making

Change Management



The system makes sure the device doesn't exceed the max power usage, so as to avoid power trips

Power usage is monitored here and updated in real-time

Automates the workflow, updating and validating changes in real-time

- Reduce planned downtime
- Improve efficiency
- Reduce workload
- Reduce human errors