Using Software to Manage Data Center Infrastructure

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APJ & EMEA

Schneider Electric

DCIM – Market Definition

Gartner

- Data Center Infrastructure Management (DCIM) tool market as a space that encompasses tools that monitor, measure, manage and control data center resources and energy consumption of :
  - Facilities infrastructure components, such as power distribution units (PDUs) and computer rooms air conditioning (CRAC) units
  - IT related components, such as servers, storage and network switches

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- DCIM systems collect and manage information about a data center's assets, resource use and operational status. This information is then distributed, analysed, and applied in ways that help managers meet business and service oriented goals and optimize their data center's performance

Schneider Electric

- DCIM is an integrated suite of applications, enable businesses to prosper by managing their data centers across multiple domains, providing actionable intelligence for an ideal balance of high availability and peak efficiency throughout the entire data center life cycle

DCIM – Value Proposition

A new level of business intelligence for your data center



- Regulatory reporting
- Resource utilisation
- Green DC initiatives

- High availability
- Service Level Agreement
- Reduce time to resolution

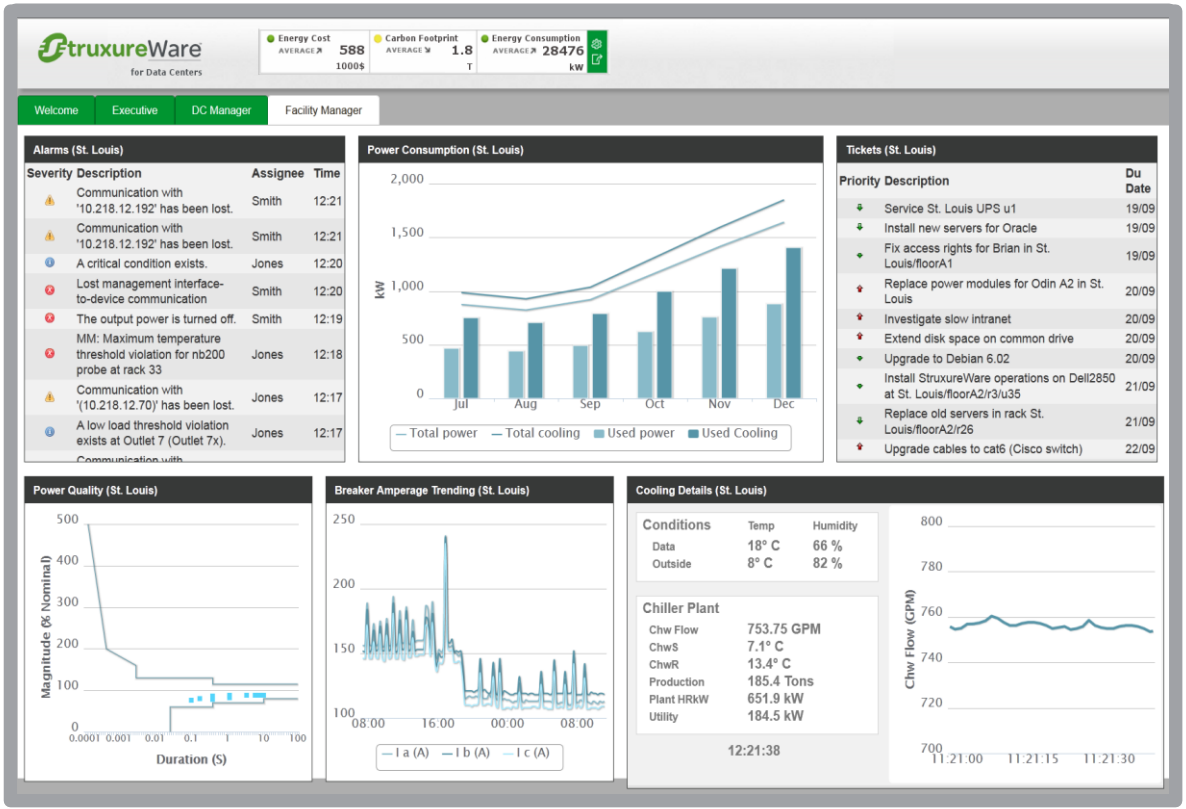
- Operational efficiency
- Do more with less
- Energy efficiency

- Reduce energy cost
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- Lower TCO

- Risk mitigation
- Human error reduction
- Improve predictability

Visibility

- *Gain In-depth Visibility into resource utilization within the DC*
- *Management and regulatory reporting*
- *Green DC initiatives*



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The SS564 Green Data Centre Performance metrics

Category A - Mandatory	Category B – Usually applicable (can be exempted if deemed to be irrelevant or impractical due to Data Center setup)
Overall data center performance metrics PUE - Power Usage Effectiveness EDFs - Energy Distribution Factors	
Airflow management Rhambient - Ambient Relative Humidity	**Airflow management** TMPrange - Temperature supply and return RTI - Return Temperature Index Effairflow - Airflow Efficiency
Electrical power chain LD - Data Centre Lighting Density	**Electrical power chain** ULF - UPS Load Factor Effups - UPS System Efficiency ITL - ICT or Server Equipment Load Density
—	**Cooling** Effcooling - Cooling System Efficiency Szcooling - Cooling System Sizing Factor
Environmental CUE - Carbon Usage Effectiveness	**Environmental** ITR - ICT Recycling

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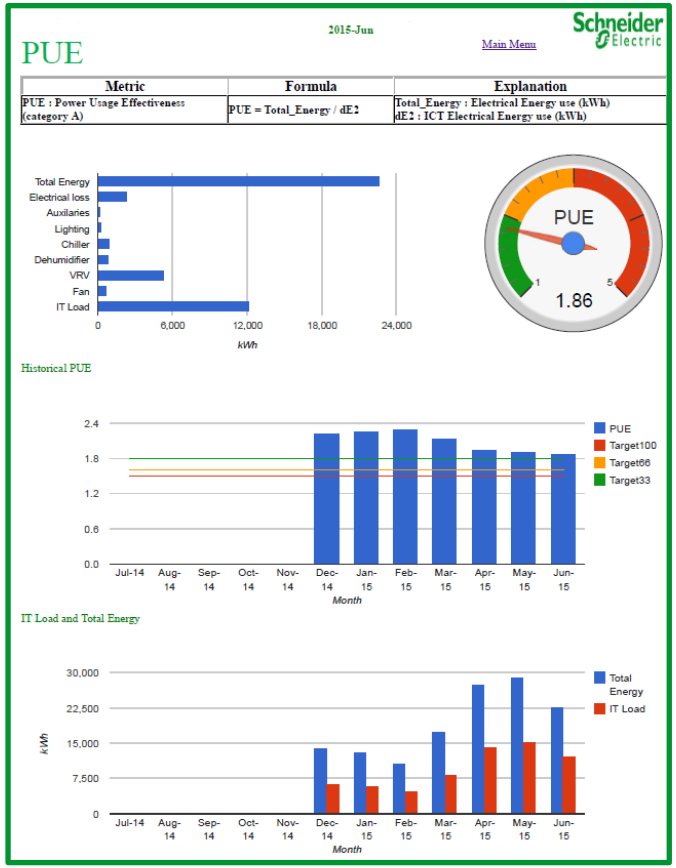
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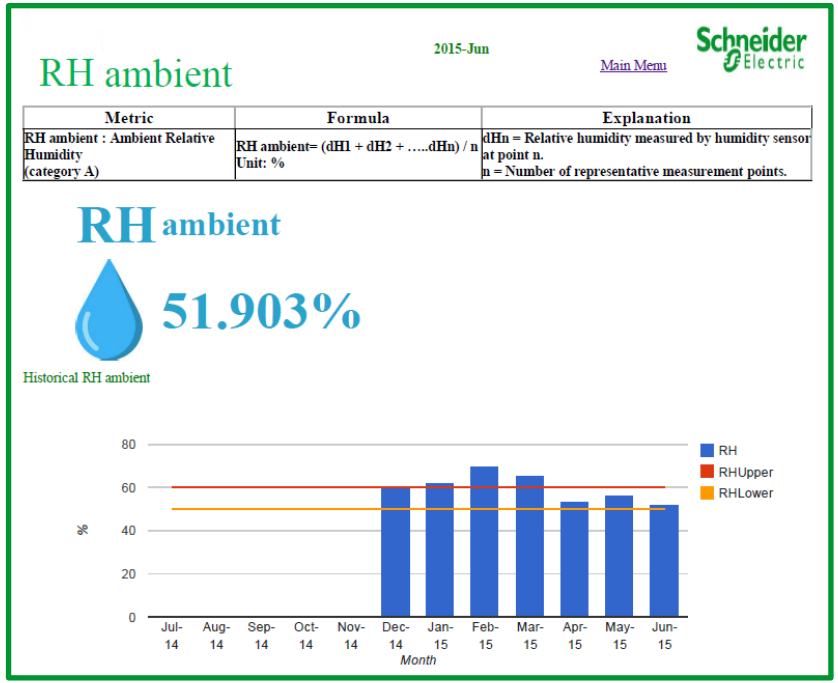
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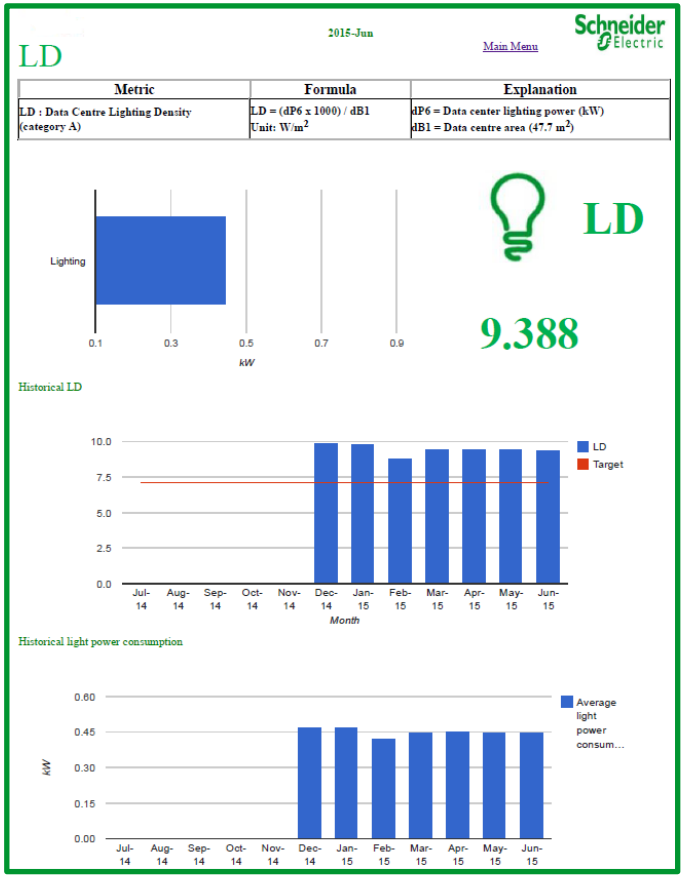
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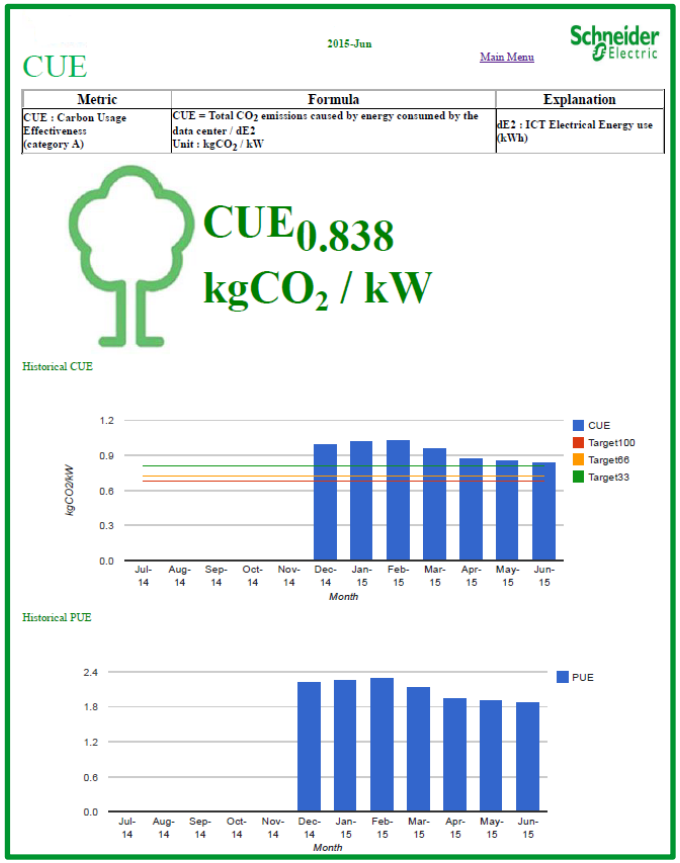
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DCIM – Value Proposition

A new level of business intelligence for your data center



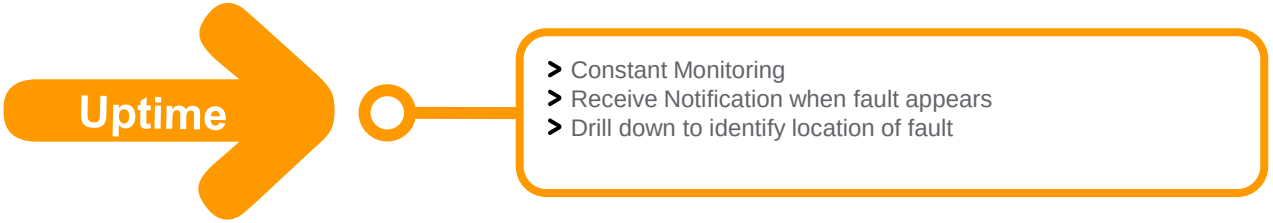
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A study of 584 U.S based data center professionals found that **91%** of data centers have **experienced an unplanned data center outage in the past 24 months**.

The average cost per minute of unplanned downtime is **US$7,900**. The average reported incident length was **86 minutes** resulting in average cost per incident of approximately **US$679,500**.

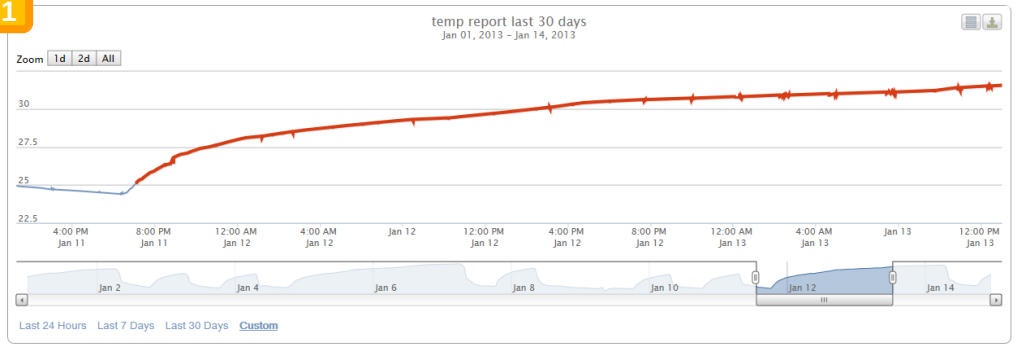
Ponemon INSTITUTE

Uptime

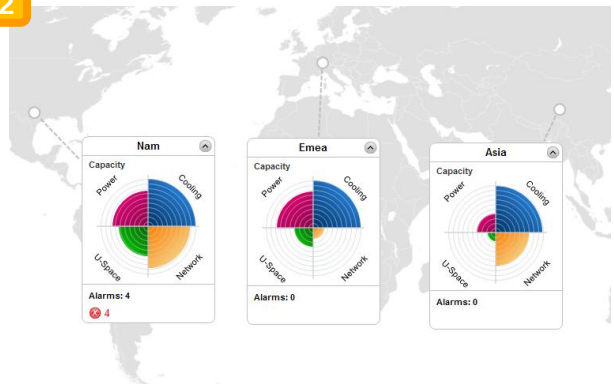
> Constant Monitoring
> Receive Notification when fault appears
> Drill down to identify location of fault

Increase in Temperature detected in the data center

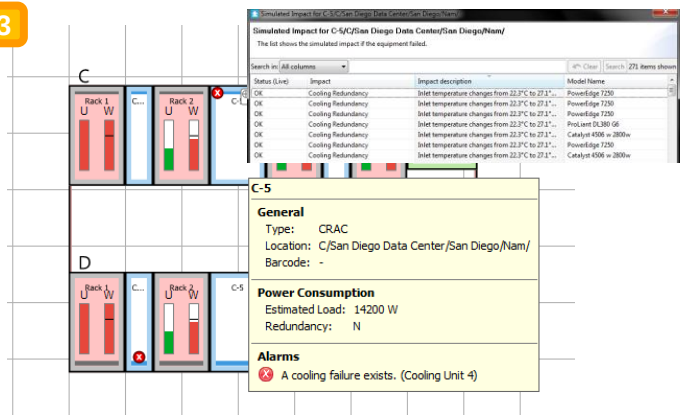
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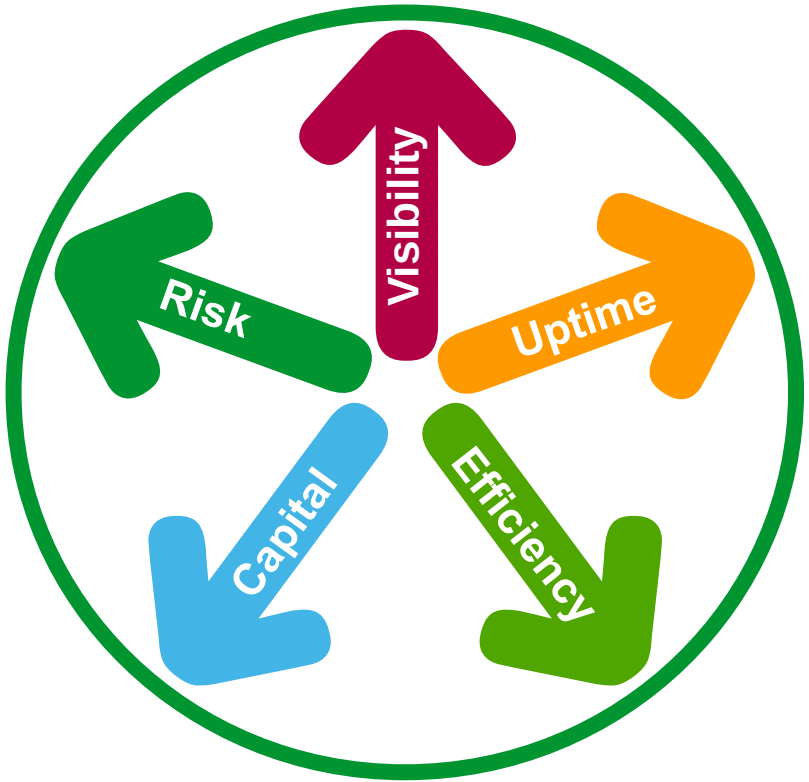


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Efficiency

> *Deploy in-depth energy efficiency analysis to **identify** the most **profitable** energy optimizing **initiatives***

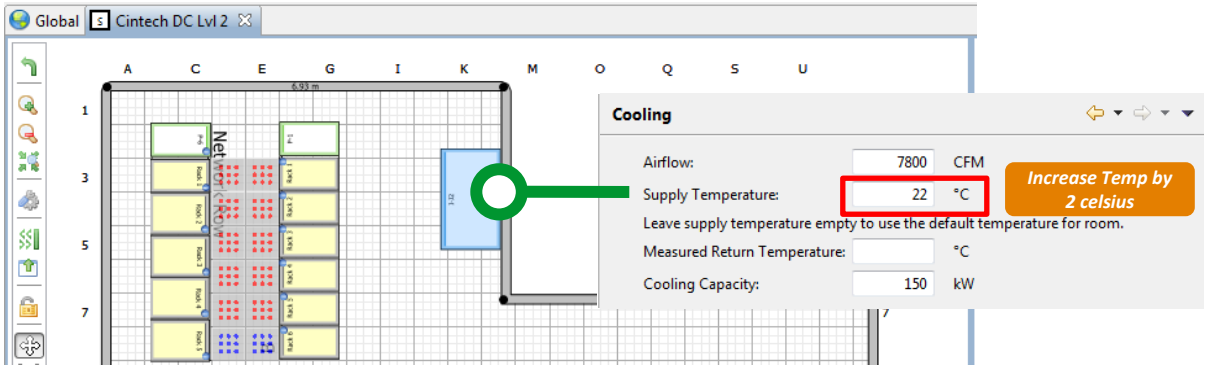
Did you know?

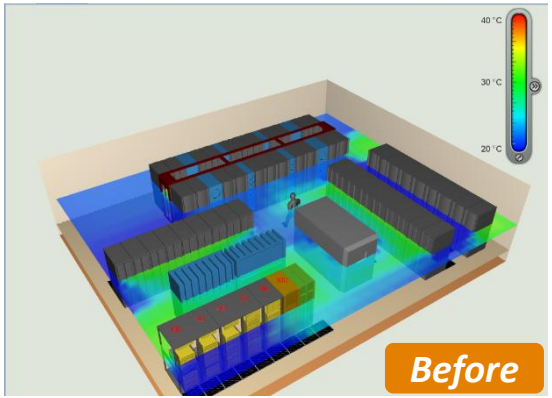
The cooling system consumes the most energy in the data center accounting for approximately 37% of data center electricity use.

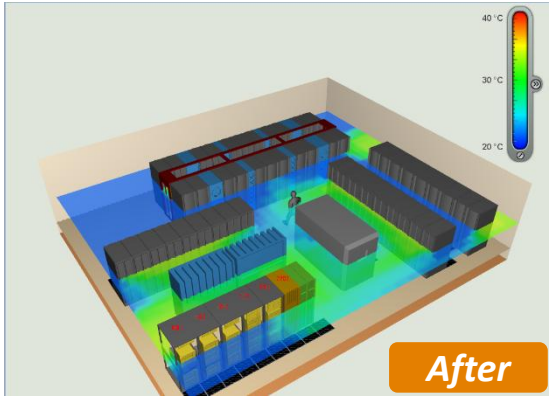
ASHRAE established new recommended temperature ranges at the inlet of the server. However many data centers set their temperatures as low as 15°C when the recommended range is 18°C to 27°C. Data Centers can **save up to 4% of energy cost for every 1°C increase** in server inlet.

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Dynamic cooling optimization

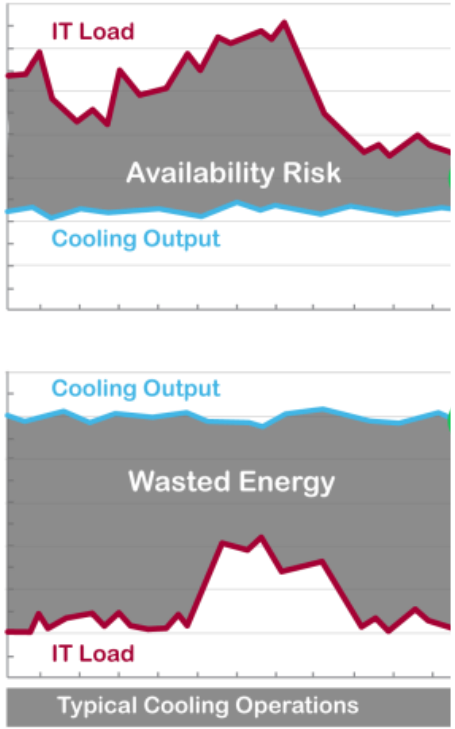
Ability to manage higher-risk environment and **precise controls** over cooling

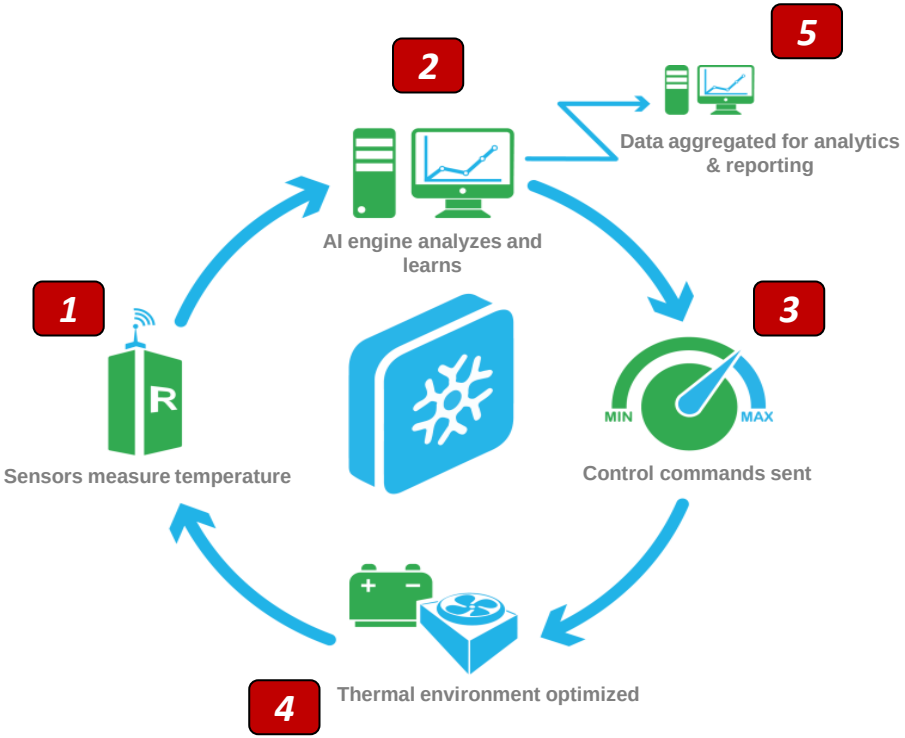
Adding **dynamic cooling optimization** to Schneider Electric's comprehensive DCIM solution



Efficiency

> *Learn the influences and effects of your cooling infrastructure*

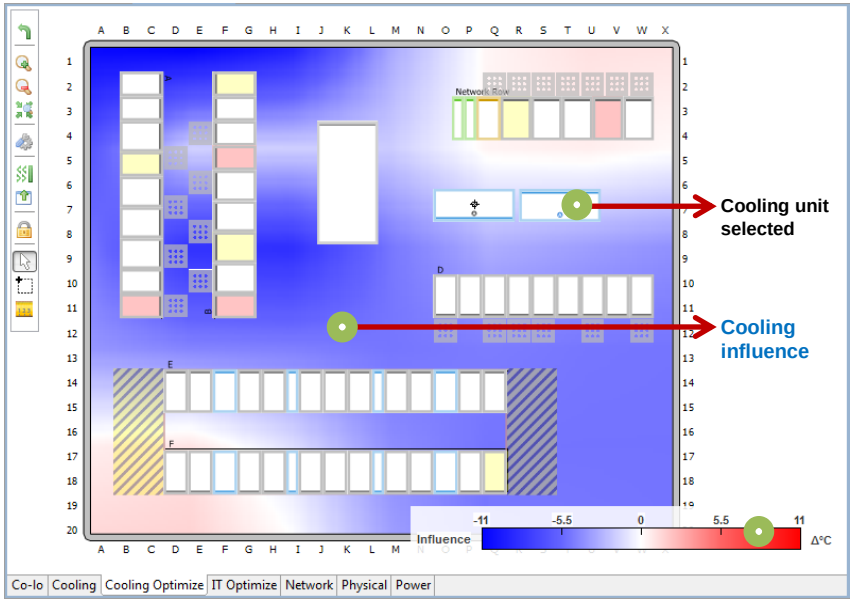




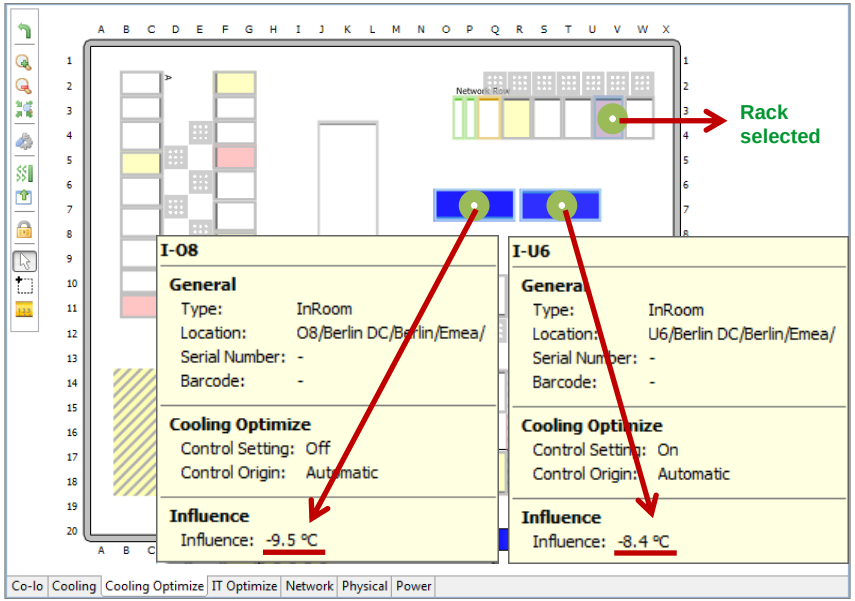
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> *Learn the influences and effects of your cooling infrastructure*

Cooling Unit Perspective



Rack Perspective



A Leading Telco Company

StruxureWare DCIM Customers

37% Saving

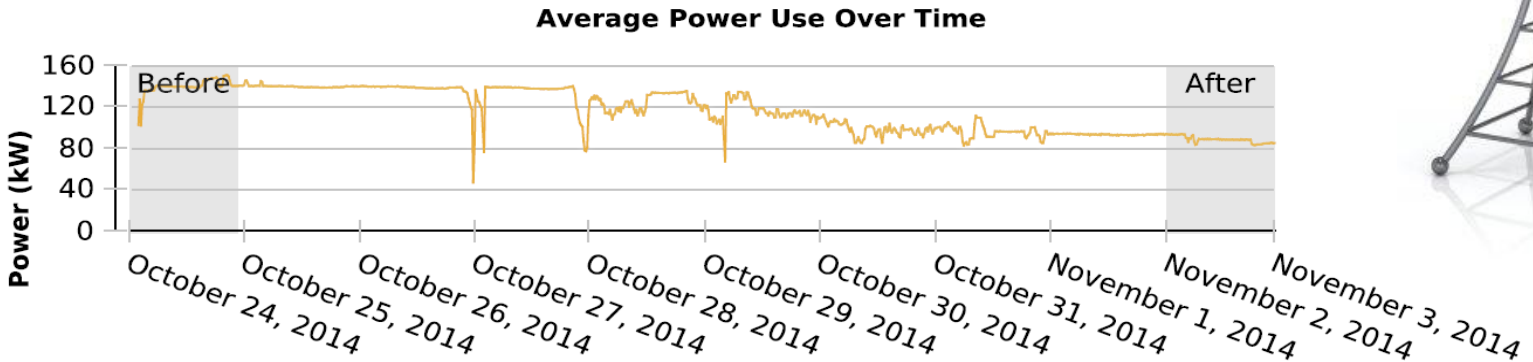
Background

- Provides fixed, mobile, ISP, IT Services and Colocation
- Estimated 22 data centers with an approximate 1,300 racks
- Strong Focus on reducing operating cost

Benefits Achieved for 1 data center hall

- ROI in under 1 year on energy savings alone by turning off 13 out of 25 CRACS
- US$40K p.a. in energy savings
- Improved reliability
- Gain great insights into facility management





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Capital

> Instead of investing in new hardware, reclaim systems that are not utilized
> Extend the life of a data centre by removing stranded capacities

Base on industry studies, 15% to 30% of servers in a data center are underutilized. These comatose equipments are consuming energy without doing any computing.

Uptime Institute™

A leading global bank 'Fires' 9,000 idle servers from data center.

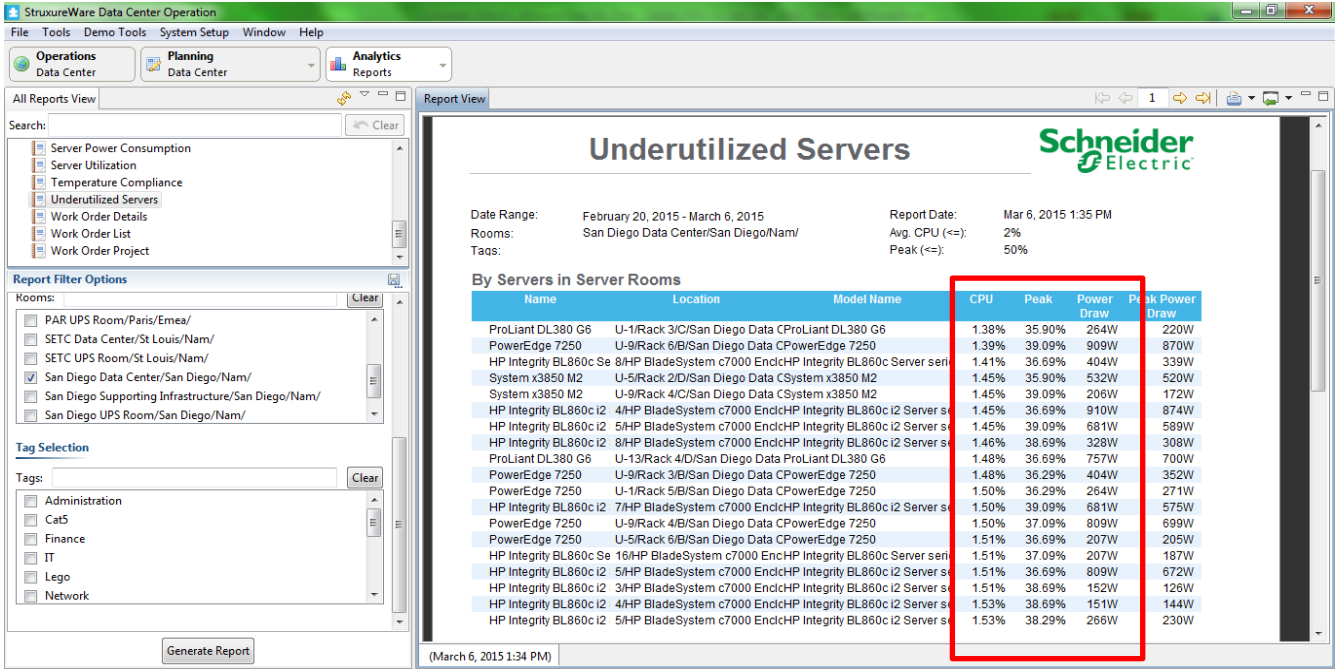
The 9000 servers removed in 2013 were consuming about 2.5 megawatts of power and by removing them, the company estimates to have reduced its annual power bills by about US$5.4 million. The company estimates to have saved about US$1.3 million on legacy hardware maintenance and freed up more than 20,000 network ports and 3,000 SAN ports.



Source: Data Center Knowledge May 2014

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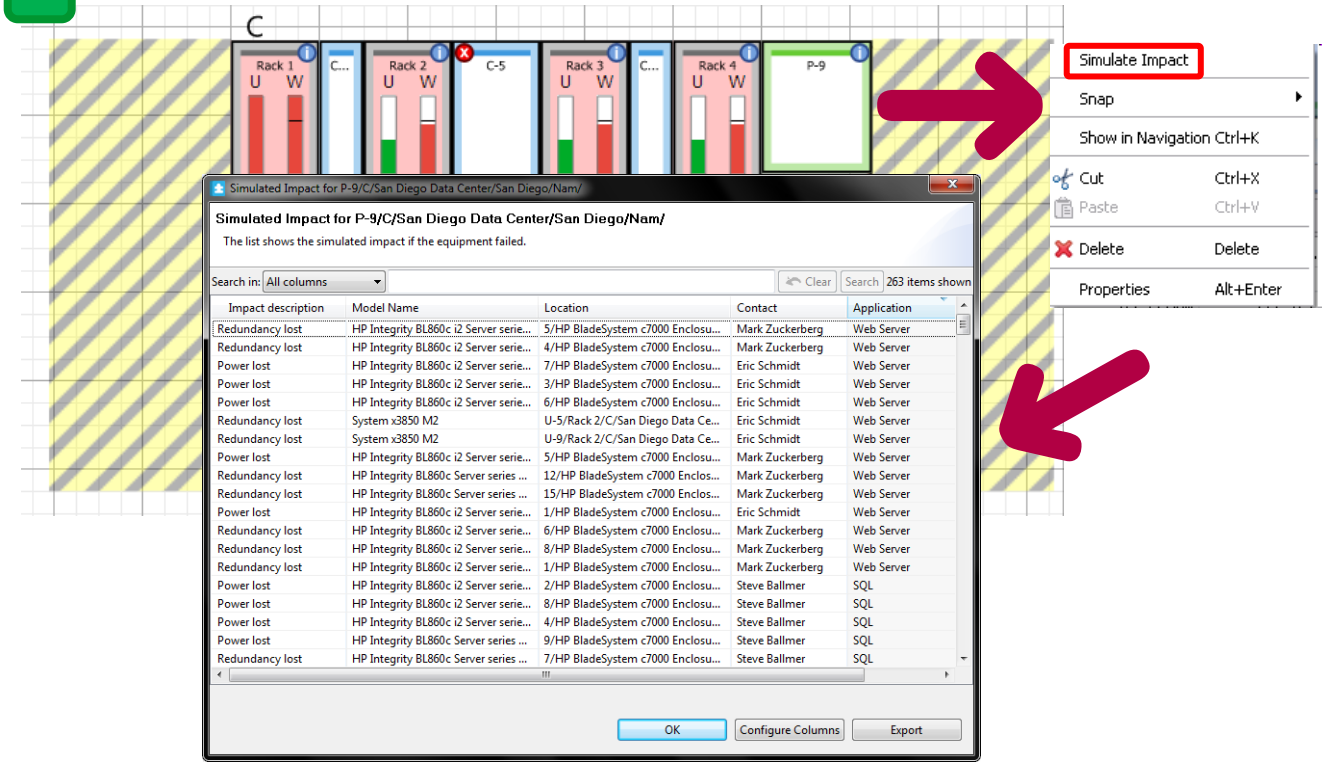
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Risk

- Enable Simulation of impacted power and cooling systems
- Mitigate potential risk by running what-if scenarios
- Risk mitigation

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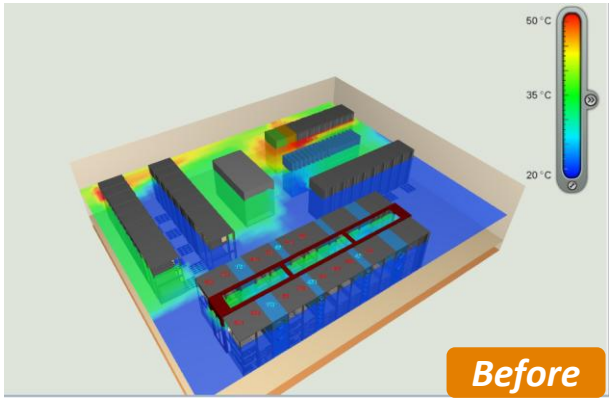


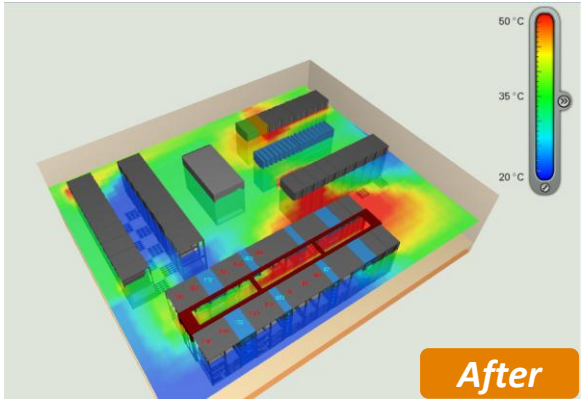
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RECOGNITIONS

StruxureWare DCIM

Industry Recognition



Magic Quadrant

Figure 1. Magic Quadrant for Data Center Infrastructure Management Tools



Source: Gartner (September 2014)

Gartner

Sept 23, 2014

StruxureWare for Data Centers was named a Leader in Gartner's magic quadrant for its DCIM solution, a comprehensive solution with good support services surrounding it, and one of the most successful DCIM products in the market today.

StruxureWare DCIM

Industry Recognition





IDC
Analyze the Future

Nov 6, 2014

Schneider was named a Leader in the IDC MarketScape: Worldwide Datacenter Infrastructure Management (DCIM) 2014 Vendor Analysis for the third consecutive year for its StruxureWare for Data Centers DCIM Suite

Thank you!



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