Increase Data Center Sustainability with DCIM Software

Application Note

Key Highlights

- Measure energy consumption at every connection point in your power path including rack PDUs, floor PDUs, busways, remote power panels, branch circuits, UPSs, and building meters to have the data you need to make more intelligent energy management decisions.
- Monitor all the environment sensors in your data center sites including temperature, humidity, airflow, and air pressure to understand the conditions of your data center and know where your opportunities to improve energy efficiency are.
- Collect, store, trend, and report on power, environment, energy, and cost data in real-time to understand your current level of energy efficiency and measure the impact of energy initiatives on KPIs such as PUE.
- Leverage automation capabilities, zero-configuration charts and reports, and visual analytics to intelligently increase energy efficiency and drive sustainability in your data center.
- Know what's going on in your data center from anywhere so you can be assured that your data center sustainability initiatives are not disrupting service or impacting customers.

Get to Carbon Neutral Faster and Easier

The demand for computing power and digital services is exploding. In the last decade, global internet traffic increased ten-fold and data center storage capacity increased by a factor of 25. With transformative yet energy-hungry innovations such as 5G mobile networks, big data, and artificial intelligence still just taking off, data center demand is only going to continue to grow.

As data centers get bigger and require more energy to keep up with the demand of modern consumers and businesses, so too does the spotlight as customers, governments, and industry regulators increasingly push for increased sustainability and social responsibility.

While many hyperscalers have set goals to reduce their carbon footprint to zero by 2030, increasing energy efficiency is an objective every data center manager should have. Beyond reducing the data center's impact on climate change, driving efficiency reduces operating costs, maximizes the value of existing capacity, and helps compliance with regulations and initiatives.

Sunbird's Data Center Infrastructure Management (DCIM) provides all the capabilities you need to dramatically improve energy efficiency in a sustainable and reliable way.

Measure, Trend, and Report on Energy Efficiency Metrics

- Complete Power and Environment Management – Transform live measured readings from meters and sensors into actionable insights by trending and forecasting power and environment metrics so you know where you stand and where you're going. Measure energy savings to collect energy rebates and carbon credits.
- Zero-Configuration Energy Analytics – Get real-time charts and reports out of the box for KPIs that help you measure, compare, and improve energy efficiency such as Power Usage Effectiveness (PUE), carbon footprint, temperature per cabinet, delta-T per cabinet, stranded power capacity per rack, and more.
- Understand Costs Any Way You Like – Generate energy cost reports by data center, business unit, customer, or service/application to identify power hogs and eliminate human error so your charges are always accurate.
- Integrate with Enterprise Sustainability Systems – Feed data center carbon footprint (CO2) information to your enterprise sustainability system for corporate sustainability reporting.

Dramatically Increase Energy Efficiency

- Save Energy By Avoiding Overcooling – Ensure compliance with manufacturer and industry-accepted temperature and humidity recommendations (i.e., ASHRAE) and project how much energy you can save by increasing temperature set points.
- Drive More Sustainable Behavior – Leverage customer billback reports to accurately allocate energy costs across your organization to drive energy efficient behavior, ensure you don't overcharge or get overcharged, and recover lost allocated charges.
- Intelligently Consolidate and Virtualize Resources – Easily identify ghost servers and power hogs that can be decommissioned, replaced with more efficient hardware, or virtualized.

Maximize the Utilization of Your Existing Footprint

- Auto Power Budget – Automatically calculate power budget profiles for each device instance (e.g., make/model of a server) based on trended actual power utilization. Customers like Comcast and eBay report improvements in rack power utilization by as high as 40%.
- Intelligent Capacity Search – Find and reserve the perfect place to deploy new equipment to maximize utilization of your existing cabinet space resources and defer wasteful new buildouts.
- Reduce Risk of Downtime – Rest assured your energy efficiency initiatives won't introduce risk by configuring your own thresholds and alerts to ensure that you are the first to know of potential power or environmental issues so you can remediate them before you experience downtime.

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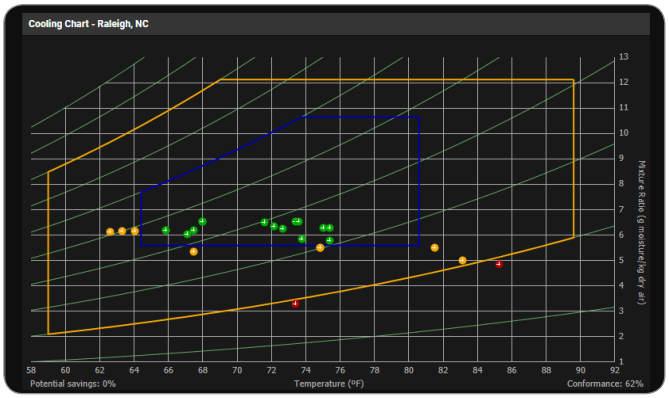
DCOI Executive Dashboard

The DCOI Executive Dashboard provides the optimal experience for ensuring your data center's compliance with the DCOI mandate or any efficiency initiative. Gain easy, one-click access to the energy KPIs you need, then act on your insights to meet requirements.

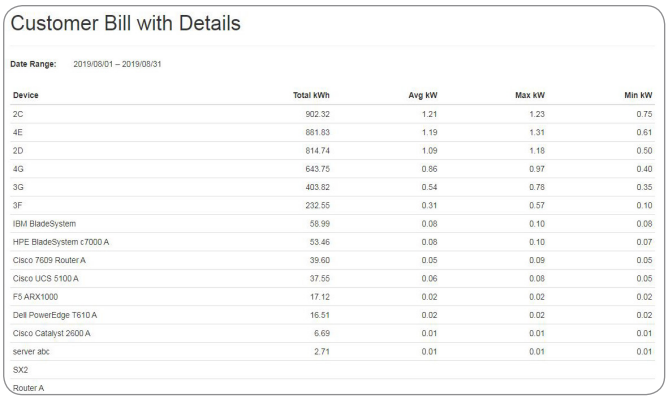
Built-In ASHRAE Cooling Chart

Easily manage your thermal envelope to manufacturer or industry recommendations. Know when to increase/decrease temperature and humidity set points and by how much to increase efficiency without risking equipment damage.



Customer Bill Back Report

Leverage automatically generated bill back reports to charge individual organizations or internal customers based on actual usage (including premium charges for overages), provide equitable distribution of power and energy charges, and drive energy efficiency and sustainability initiatives.



Customer Bill with Details

Date Range: 2019/08/01 – 2019/08/31

Device	Total kWh	Avg kW	Max kW	Min kW
2C	902.32	1.21	1.23	0.75
4E	881.83	1.19	1.31	0.61
2D	814.74	1.09	1.18	0.50
4G	643.75	0.86	0.97	0.40
3G	403.82	0.54	0.78	0.35
3F	232.55	0.31	0.57	0.10
IBM BladeSystem	58.99	0.08	0.10	0.08
HPE BladeSystem c7000 A	53.46	0.08	0.10	0.07
Cisco 7609 Router A	39.60	0.05	0.09	0.05
Cisco UCS 5100 A	37.55	0.06	0.08	0.05
F5 ARX1000	17.12	0.02	0.02	0.02
Dell PowerEdge T610 A	16.51	0.02	0.02	0.02
Cisco Catalyst 2600 A	6.69	0.01	0.01	0.01
server abc	2.71	0.01	0.01	0.01
SX2				
Router A				

Delta-T Per Cabinet Chart

At a glance, know the temperature and delta-T of your racks for any sensor positions to identify overcooling and help balance airflow volume. Use this data to maximize cooling capacity and defer capital expenditures.

Call 732.993.4476 or visit **SunbirdDCIM.com**

Sunbird Software is changing the way data centers are being managed. With a focus on real user scenarios for real customer problems, we help data center operators manage tasks and processes faster and more efficiently than ever before, while saving costs and improving availability. We strive to eliminate the complexity they have been forced to accept from point tools and home grown applications, removing the dependency on emails and spreadsheets to transform the delivery of data center services. Sunbird delivers on this commitment with unexpected simplicity through products that are easy to find, buy, deploy, use, and maintain. Our solutions are rooted in our deep connections with our customers who share best practices and participate in our user groups and product development process.

Based in Piscataway, NJ, Sunbird serves over 1,850 DCIM customers worldwide. For more information, please visit SunbirdDCIM.com.

AN010 July 2022

Sunbird®
DCIM that's easy, fast, and complete

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