# a m i® DCM

Leading the Way in Data Center Manageability and Sustainability

Unlocking Data Center Sustainability Through Advanced Manageability

AMI® Data Center Manager (AMI® DCM), formerly known as Intel® Data Center Manager, is a powerful software that enables data center managers and IT operators to increase the efficiency of the data centers they manage and reduce their carbon footprint. This is achieved through advanced monitoring, calculating, reporting, alerting, predicting, and controlling capabilities, which also improve energy consumption, thermal conditions, device health, and asset management. Real-time visibility into these aspects provides valuable insights and tools to identify and resolve issues quickly, resulting in enhanced data center performance, availability, cost savings, and sustainability.

Latest Features

✔ Support for AMD-based servers

✔ Apache Kafka data streaming

✔ Scalability up to 60,000 nodes

✔ Support for new PDUs, UPSs, switches, and storage devices

✔ Support for HPE Gen 11 servers

✔ High Availability with a single license

✔ New and enhanced RESTful APIs

✔ Traditional Chinese support
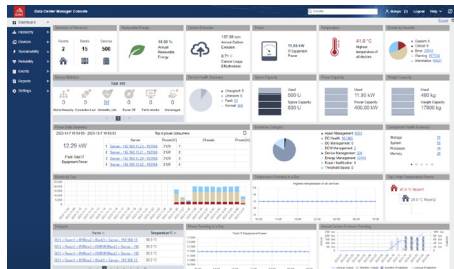
Console Dashboard
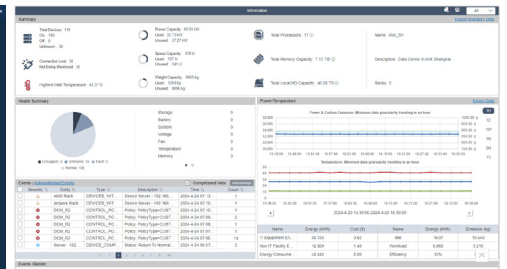
Heirarchy Summary Dashboard

Data Center Sustainability

With the increased public awareness of today's environmental and climate risks and challenges, it is only sensible to take serious actions to make data centers greener, especially with data centers becoming denser, with multiple GPUs and other accelerators per server.

That is why new regulations for data centers continue to evolve - from strategies to improve efficiency to governmental mandates – making data center sustainability not just optional but essential.

AMI® DCM introduces brand new features that aid data center managers and IT operators in achieving and improving their sustainability and efficiency objectives by monitoring, calculating, reporting, alerting, predicting, and controlling data center carbon emissions and footprint.

AMI® DCM

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Measuring Carbon Emissions

AMI® DCM collects real-time power consumption data from servers and other IT devices in data centers. By inputting the carbon intensity of electricity used (in kilograms of CO_2-equivalent emissions per kilowatt-hour) in various intervals such as hourly, daily, or monthly, AMI® DCM uses the Power Usage Effectiveness (PUE) metric to calculate carbon emissions in real-time as shown in the opposite figure. This can be calculated on the data center, room, rack, or device level.

Additionally, AMI® DCM can calculate carbon emissions for logical groups of devices, making it possible to calculate the carbon footprint of specific workloads.

Formula for Measuring Carbon Emissions

Carbon Emissons Trend & Projection

Modeling Carbon Emissions

AMI® DCM can project carbon emissions and can trigger alerts based on user defined quotas. Also, AMI® DCM can use CPU/memory/IO utilization data to predict the power consumption and carbon emissions of a single node.

Controlling Carbon Emissions

AMI® DCM can identify underutilized servers so that they can be consolidated to reduce carbon emissions. Setting power caps for servers is one tool AMI® DCM can use reduce their carbon emissions.

Server Power Capping

Carbon Intensity

Carbon intensity is a measure of the amount of carbon dioxide or other greenhouse gases that are emitted per unit of energy consumer. Typically expressed in kg CO_2/kWh. This can be adjusted in AMI® DCM at a granular level (e.g., set 9:00AM to 4:00PM for carbon intensity of solar), and that can be copied to other months with one click.

Server Replacement Analysis

AMI® DCM's server replacement analysis feature can compare the sustainability of two server models based on their average power consumption over time rather than using their maximum power, idle power, or median power. This evaluation is based on actual customer workload data that is analyzed using AI algorithms to project the impact on carbon emissions if the server replacement is carried out.

This enables data center managers to make informed server procurement decisions that optimize energy efficiently and reduce carbon emissions.

Server Replacement Analysis

Cooling Analysis

AMI® DCM's cooling analysis feature directly collects device temperatures to identify overcooled rooms in data centers. Overcooling is a common problem that unnecessarily consumes power and increases carbon emissions.

By identifying overcooled rooms, data center managers can safely raise their set point temperature, optimizing energy usage and carbon emissions.

Cooling Analysis

Carbon Emission Report

The importance of carbon emission reporting for enterprises cannot be overstated. A well-presented report not only helps companies comply with sustainability regulations but also enhances their chances of securing funding from governments and demonstrating their commitment to becoming carbon neutral. AMI® DCM offers highly detailed carbon emission data reporting, allowing data center managers to view emissions on a per-device, per-hour basis.
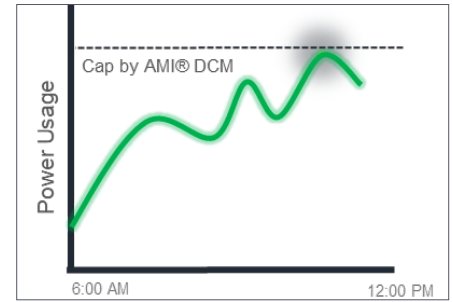
This level of granularity allows for customizable reporting, tailored to meet different organizational needs.

Carbon Emission Reporting

AMI® DCM
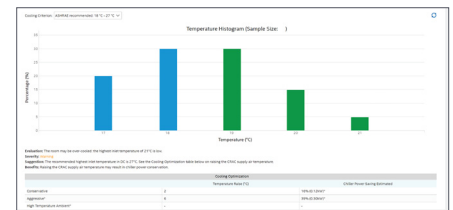
Data Center Manageability

AMI® DCM provides comprehensive features to simplify data center manageability within a single pane of glass. It provides real-time monitoring of infrastructure health, utilization, power, and thermal management. It also includes asset inventory and firmware updating capabilities. With its user-friendly interface, simple installation requirements, and broad range of features, AMI® DCM is an essential tool for optimizing data center performance and efficiency.

Capacity Planning and Energy Consumption	Optimizing Rack Density	Forecasting Future Space and Power Needs	Granular Thermal Mapping	Device Level Energy Monitoring	Power Capping
Utilization and Health Monitoring	System Utilization Monitoring	Identifying Zombie Servers	Detecting Real-time Health Issues	Remote System Management	Reliable and Customizable Alerts
Infrastructure and Asset Manageability	Rightsizing DC Infrastructure	Real-time Discovery and Asset Tracking	Predicting Health Issues	Alerts on Power/Thermal /Health	End to End Data Aggregation

AMI® DCM Installation Requirements

REQUIREMENTS	DETAILS
Supported Operating Systems	• Microsoft Windows Server 2016, 2019, 2022 • Red Hat Enterprise Linux 7.9, 8.9, and 9.3 Server x86_64 • SUSE Linux Enterprise Server 12 SP5 and 15 SP5 x86_64 • Ubuntu Server 18.04.6, 20.04.6, and 22.04.4 x86_64 • Debian 11.9 x86_64
Hardware Requirements	Recommended Specification for a scaled environment (e.g. managing up to 60,000 nodes) • 2 * 16 Core x86 Processor @ 2.60GHz or higher • 192GB RAM • 2TB SSD • 10 Gigabit Network

For more information:
Visit: www.ami.com/ami-dcm
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