Infrastructure Management & Monitoring for
Business-Critical Continuity™

Data Center Infrastructure Management

Managing the Physical Infrastructure for Greater Efficiency

EMERSON™
Network Power

DATA CENTER INFRASTRUCTURE MANAGEMENT

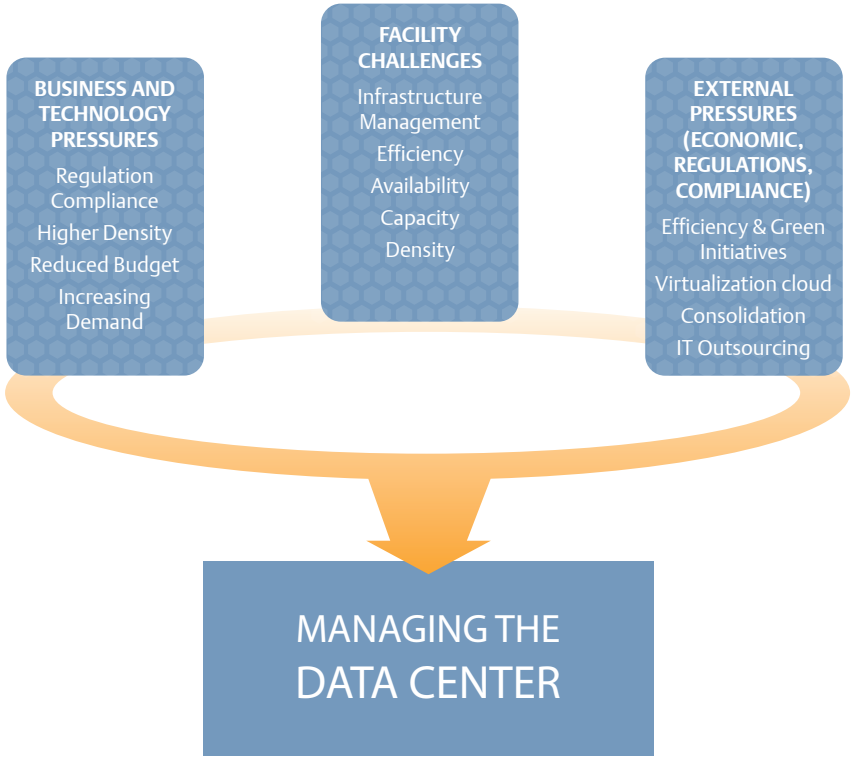
Managing IT and Physical Infrastructure for Greater Efficiency

Emerson Network Power is the market leader in Data Center Infrastructure Management (DCIM). We are the only provider with industry-leading products in all components required for comprehensive infrastructure management. Our breadth of capability and depth of industry expertise enable us to deliver a holistic solution that preserves availability and drives efficiency throughout the data center infrastructure.

AN IMPERATIVE TO IMPROVING PERFORMANCE AND CONTROLLING COSTS

It has never been more difficult to manage a data center. The demand for services, environmental complexity and criticality of availability is at an all-time high.

Add to those factors, a constant pressure to control costs, and it is easy to understand why businesses are rethinking how they run the data center.



Emerson Network Power is the trusted source for innovative solutions and expertise in power and precision cooling systems, integrated racks and enclosures, power switching and controls, monitoring and connectivity. With our Liebert™, Avocent® and Aperture™ brands, we've been delivering DCIM benefits for years.

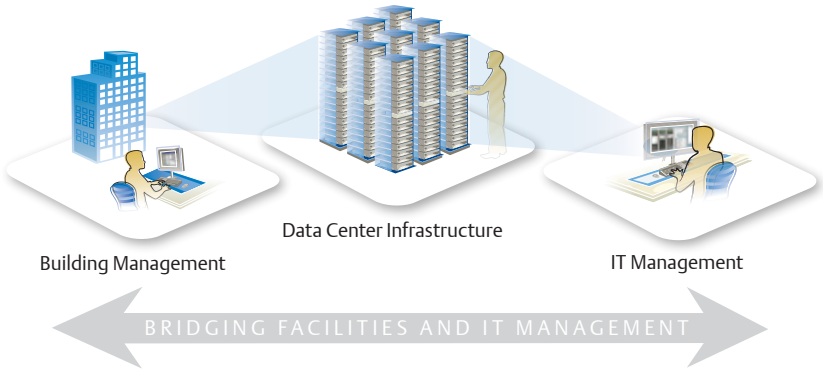
Changing the Way Data Centers Are Managed, Today's Top Priority

By simply implementing a tool that stores all the configuration information and is the "source of truth" for the organization, along with instrumentation and active monitoring, companies can transform their operation and realize significant return on investment.

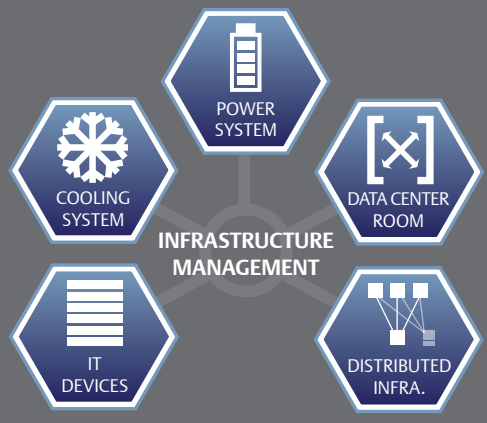
By implementing the right combination of hardware and software solutions to manage the data center infrastructure, you can:

- Reduce day-to-day costs and time involved in operating and maintaining the data center
- Enable better management decisions by getting the right information, to the right people, at the right time
- Make better use of existing IT and infrastructure resources, optimize data center performance and improve system availability

Data center managers need visibility into the the IT and physical infrastructure.



IT INFRASTRUCTURE	PHYSICAL INFRASTRUCTURE
▪ Computing ▪ Storage ▪ Network	▪ Precision Cooling ▪ Power ▪ Space



Gain Insight into Your Infrastructure and Proactively Manage Your Data Center

With a holistic DCIM solution, you can:

- Proactively identify issues before they escalate into problems
- Gain insight into asset/system performance to improve processes, increase productivity and maximize operational and capital resources
- Model the data center's configuration and status
- Incorporate real-world data to optimize performance and decisions
- Plan for and accommodate future IT needs

"A data center infrastructure management system collects and manages information about a data center's assets, resource use and operational status. This information is then distributed, integrated, analyzed and applied in ways that help managers meet business and service-oriented goals and optimize the data center's performance." – 451

The Stages of Adoption

Each step in the process delivers positive return on investment for your business.

Data Capture and Planning

Step 1: Know What You Have

The first step in managing your infrastructure efficiently is documenting what equipment you have, along with its location and dependencies. The right software tools will allow you to track and visualize the infrastructure in a single system, giving you accurate and complete information to make decisions.

A complete planning and management tool should include:

- Device nameplate tracking
- Power chain mapping
- Power load modeling
- Device connectivity
- Visualization
- Reporting
- Change management
- Real-time power integration

Monitor and Access

Step 2: Instrumentation and Access

Enabling communication with your equipment is a critical step in managing performance. Increased visibility and control allow for quick equipment assessment and corrective action in real time.

An instrumented infrastructure should include:

- UPS web cards
- Battery monitors
- Server control
- KVM switches
- Power meters
- Leak detection
- Temperature sensors
- Managed rack PDUs
- Cooling control
- Auxiliary power controls

Analyze and Diagnose

Step 3: Proactive Management

Operations data from the data center environment improves the accuracy of the model, enabling you to have critical data at your fingertips to proactively manage and control performance. Benefits include utilizing much more of the expensive resources you manage and improving the efficiency of cooling and power systems, thereby saving significant money for IT.

Recommend and Automate

Step 4: The Future

Incorporating the aforementioned tools into your operation and creating the rules for decision making and analysis set you up for the future. The next step in the evolution of DCIM is a controlled loop control system that incorporates real-time tracking and control of equipment.

"In heterogeneous data centers, optimization is the key issue in the market. A holistic approach is required for sustainability." – IDC

Take control of your IT assets, locations and room layouts.

Data Capture and Planning

With data capture and planning capabilities, you can determine where assets are located and see how devices are interconnected. Commission and decommission physical assets more efficiently and determine if you have the space, cooling and power to address future computing requirements.

Avocent Data Center Planner™ Inventory Tracking and Planning Solution

Visual infrastructure planning and management functionality give you the power to view physical and IT infrastructure, providing faster changes, reduced errors, better availability and improved management.

Aperture Suite Advanced Infrastructure Planning and Management

Provides a unified view of physical resources across multiple data centers so you can optimize energy and capital resources, extend the data center lifespan and enable the automation and standardization of processes.

Manage Your Critical Infrastructure

Monitor and Access

Emerson Network Power puts critical information at your fingertips with a solution set of hardware and software tools designed for monitoring and managing networked devices so you can obtain more control of your physical infrastructure and IT systems.

Liebert SiteScan™ Centralized Monitoring and Management

Enhance availability and efficiency by delivering high-performance monitoring, trending and control of virtually any piece of critical support equipment—whether it is in the next room or thousands of miles away. With the added ability to integrate with building management systems.

Liebert Nform™ Centralized Monitoring

Improve system availability by closely monitoring network connected physical infrastructure equipment using existing Ethernet wiring. This software provides trending analysis, critical event notifications and the ability to initiate trigger response actions such as shedding non-critical power loads to provide more battery runtime to key systems.

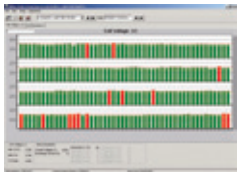
Avocent DSView™ 3 Software + Avocent Management Appliances = Remote Access, Monitor and Control for Target Devices

Manage target devices on multiple platforms at numerous locations–anywhere, anytime–by combining Avocent DSView 3 software with KVM appliances, serial console appliances, service processor gateways or PDU.

Avocent KVM Appliances allow direct access and control of remote servers, network equipment and other devices for faster diagnosis, reconfiguration and resolution.

Avocent MergePoint™ Service Processor Managers allow IT organizations to streamline data center management and reduce operational costs by leveraging the service processor technologies already present in their servers

Avocent Serial Appliances enable remote monitoring, diagnosing and troubleshooting of console servers.



Albér Battery Monitoring System Battery Testing and Monitoring

It's a proven fact that batteries are the weakest link in the power stream, so you need to be confident that they are ready when you need them most. Albér Battery Monitoring systems ensure reliable performance and proactive monitoring.

Avocent DSView 3 Software – Consolidated Remote Access and Control for Dispersed Managed Devices

The Avocent DSView 3 management software consolidates all data center management functionality into a single interface to deliver the complete control necessary for the 24/7 data center. Data center managers gain a secure, browser-based management solution for all connected IT assets and network devices, both in-band and out-of-band, no matter the location.

Liebert iCOM™ – Robust Control of Precision Cooling Systems

As energy and availability demands increase in the data center, you need optimal performance from your cooling systems. Only the Liebert iCOM provides complete, auto-control of your environment and reduces energy costs and improves performance.

Analyze and Diagnose

Gain deeper insight into performance and proactively manage capacity.

Aperture Integrated Resource Manager

Aperture Integrated Resource Manager transforms monitored values into business intelligence. Data from disparate systems is aggregated into a single presentation that allows IT managers to identify trends and precisely manage rack capacity, allowing for more equipment within existing spaces. The net benefit is significant cost savings today while deferring/eliminating the cost of building out additional space or new data centers.

Recommend and Automate

Receive information and execute decisions in real time.

Trellis dynamic infrastructure optimization platform

The Trellis™ dynamic infrastructure optimization platform is Emerson Network Power's next-generation DCIM solution, a real-time critical infrastructure management and control system.

"IT resources must be extremely agile, so they can be updated, reconfigured and expanded rapidly to meet changing business requirements." – EMA

Physical Infrastructure: A Key Component to DCIM

Emerson Network Power has been the leader in total data center infrastructure support for decades. Our expertise extends from connectivity, racks, power, cooling and services. We can deliver a holistic, intelligent, integrated infrastructure to enhance DCIM.

Network Connectivity

DCIM must start with interconnectivity. Emerson Network Power provides a comprehensive line of web cards, monitors and sensors for communications and instrumentation.

Rack PDU Solutions

Our Rack PDU family of products helps you to distribute power to rack-based equipment. From modular and intelligent to basic power strips, there's a Rack PDU to fit your need.

Precision Cooling

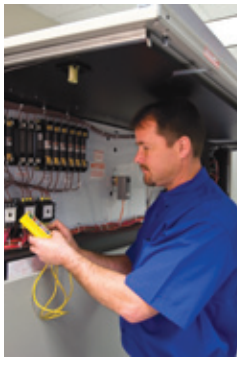
Cooling the data center has never been more dynamic. Emerson Network Power pioneered the computer cooling market. Today, Liebert solutions continue to offer best-of-breed, room-based, row-based and rack-based cooling systems for maximum flexibility and efficiency.

Knurr™ Racks and Enclosures

Our Knurr rack line simplifies equipment installation with unique tool-less design and optimizes environmental conditions with superior airflow. Options allow for partial or full containment for a practically future-proof solution.

UPS and Power Systems

UPS systems in the industry's widest range of sizes, including desktop, rack-mount and enterprise room-based configurations to meet the demands of any degree of availability, modularity, scalability and efficiency.



Services

Local service and support is available to provide emergency service and installation assistance, as well as a host of data center electrical services.

Data Center Assesments

Emerson Network Power provides professional energy and electrical and thermal assessments that help you identify gaps in your power and cooling infrastructure, increased energy efficiency, reduce operating costs, improve IT system availability and plan for additional IT capacity.

Emerson Network Power, a business of Emerson (NYSE:EMR), is the global leader in enabling Business-Critical Continuity™ from grid to chip for telecommunication networks, data centers, health care and industrial facilities. Emerson Network Power provides innovative solutions and expertise in areas including AC and DC power and precision cooling systems, embedded computing and power, integrated racks and enclosures, power switching and controls, infrastructure management, and connectivity. All solutions are supported globally by local Emerson Network Power service technicians. Aperture and Avocent solutions from Emerson Network Power simplify data center infrastructure management by maximizing computing capacity and lowering costs while enabling the data center to operate at peak performance. For more information, visit www.Aperture.com, www.Avocent.com or www.EmersonNetworkPower.com.

Emerson Network Power.
The global leader in enabling *Business-Critical Continuity™.*

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- Embedded Power
- Infrastructure Management & Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling

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- Racks & Integrated Cabinets
- Services
- Surge Protection

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