iNAV DCIM Solution-
The Best Utilization of Data Center Resources in One Portal

newTECH 创建科技 technology

Cutting-edge

DCIM Technology to Maximize Your Critical Resources

NAV

A Data Center Infrastructure Management System

End-to-end Solution for Imperative Infrastructure Management

Seeking ways to save budget and manpower on managing data centers? Today, data center infrastructure is a critical environment for evolving IT development. Managing it in a unified approach can fully address the need for availability, security, efficiency, and integration.

Conceptually, iNAV DCIM is a turnkey solution for data center implementation, monitoring, and management. This intelligent solution specializes in providing flexible platforms, automatic reporting systems and effective communication channels with 3D visualization of assets, facilities, and the environment.

Based on the eight modules, iNAV is an integrated software application to oversee both IT and physical infrastructure management. With iNAV's help, the data center manager can run a flexible, well balanced, optimized and efficient data center in one click.

How can iNAV DCIM meet today's challenge in Data Center Management?

iNAV DCIM tools monitor, measure, manage and/or control data center resources and energy consumption of both IT-related equipment and facilities infrastructure components. Rather than the general building management system (BMS) tools, it is data-center-specific.

Facilitate Critical Equipment Control

To optimize data center power, cooling and physical space, solutions have to be designed to accommodate real-time power, temperature, and environmental monitoring. The solutions must also support resource management, including the location and inter-relationships between assets.

Strengthen Analytical Management

Additionally, iNAV DCIM tools have reporting and visualization capabilities. These are necessary to analyze the data collected for data center operators, facility, and operation managers. iNAV DCIM solution also include functions such as performance analysis, environmental monitoring, workflow management, IT asset monitoring, and resources control.

Newtech-The Pioneer Builder of Critical Environments

Since 1992, Newtech has been one of the market leaders in facility management and IT infrastructure for critical environments with consultancy services, design, implementation and project/system management.

Headquartered in Hong Kong, Newtech has developed across Greater China and the Asia Pacific region, including Beijing, Shanghai, Guangzhou, Shenzhen, Singapore, Malaysia, and Vietnam.

Our Objective

Newtech strives to provide state-of-the-art technology, innovative design and build, and IT management platform for data centers. We aim at providing flexible modular design, zero latency, and significant energy efficiency, giving our customers peace-of-mind in managing all critical environments.

Number of Offices:
7 locations

Number of Employees:
300+ staffs

DC Built Out Gross Areas:
6,000,000+ sq.ft

DC Facility Management Gross Area:
3,100,000+ sq.ft

MVA Estimation:
400+ MVA

Peace-of-mind iNAV DCIM Solution

Fully Optimized Data Center Resources

Enable continuous optimization of data center power, cooling, and physical space usage. This can help defer capital expenses for expanding existing or constructing new data centers.

Manages both IT and FM Systems

Integrates IT and facility management of a data center. This helps bridge the gap between the IT and facility managers by providing unified information, analysis, and reports.

Maximizes Energy Efficiency

Achieves greater energy efficiency. Energy cost savings alone are often enough to justify the purchase of DCIM tools that come with benefits more difficult to quantify, such as improved workflow.

Oversees data center and IT equipment

Enhances resource and asset management by showing how the two are inter-related.

iNAV DCIM Solution Architecture

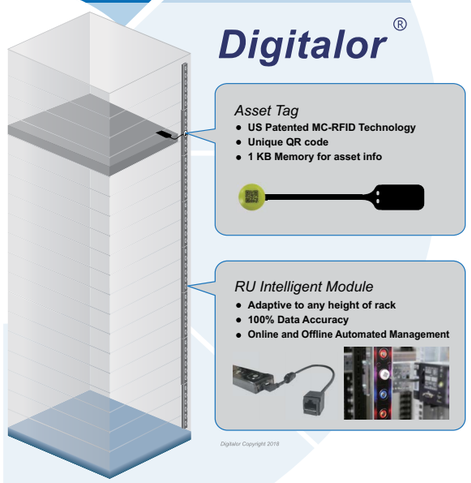
Newtech's proprietary iNAV DCIM solution architecture is composed of eight modules. Each module has a particular architecture in the DCIM domain.

The eight modules work together seamlessly to support the required equipment provisioning, resources optimization, asset remediation, and workflow documentation of the data center.

iNAV DCIM solution coordinates and consolidates both IT and facility management constantly to maintain a delicate balance of computing supply with the ever-changing demand. Thus, data center infrastructure management is predictable to IT service management, business intelligence, and financing sectors.

NAV
A Data Center Infrastructure Management System

Asset Management



Digitalor®

Asset Tag
- US Patented MC-RFID Technology
- Unique QR code
- 1 KB Memory for asset info

RU Intelligent Module
- Adaptive to any height of rack
- 100% Data Accuracy
- Online and Offline Automated Management

An overall asset/inventory management of data center operations, this module contains a high fidelity 3D visual of every device's location and placement. It can easily search and reserve space, power, and network connectivity for all IT assets.

Also, you can quickly locate server details, network, asset attributes, and storage equipment across the entire infrastructure, equipped with Digitalor, it delivers real-time and automatic physical asset monitoring on IT equipment.

- Exclusive 3D view of data center and IT equipment
- Equipment allocation and utilization
  - Highly visible with brand, model, hostname and operation system
- Simplify online inventory stock taking
- Intelligent Smart Rack Tag
  - Monitoring U-level asset inventory and unauthorized changes

U Level Real-time Asset Management- The Management Revolution

- Real-time Physical Asset Monitoring
- Maximizes RU Utilization Rate Increased by 10-20%
- Increases Asset Audit Efficiency by 1,000 times+

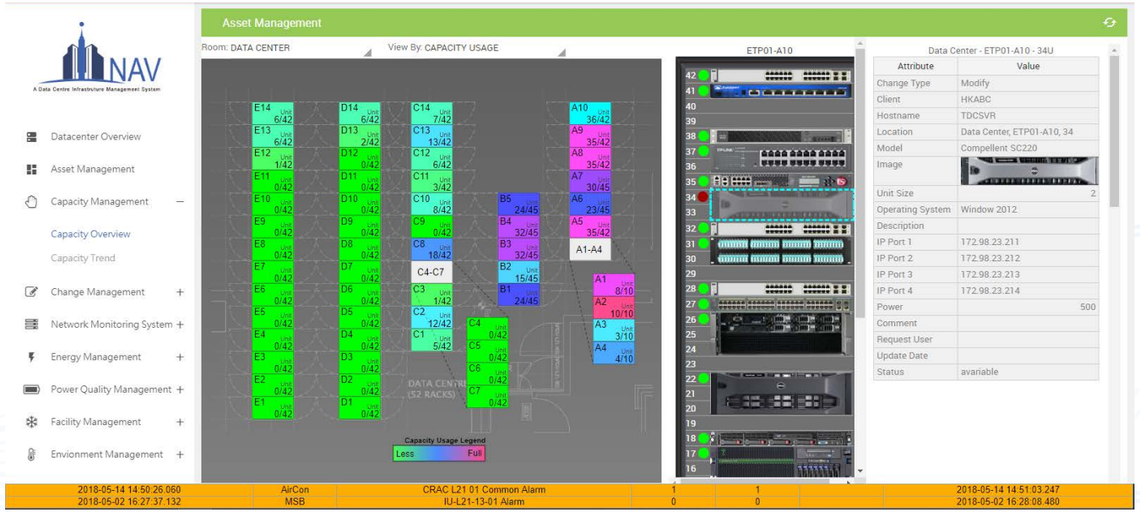
Rack Capacity Management

Planning and optimization of infrastructure capacities to fully utilize the data center is the best solution for cost-saving.

This is an overview of capacity availability within an organizational context, providing instant information of actual space, cooling consumption, power, network, and weight availability against data center capacity constraints.

It can also provide instant server placement recommendation through a real-time analysis of available data center capacity.

- Top viewing of each rack power and space usage including historical usage supports



Change Management

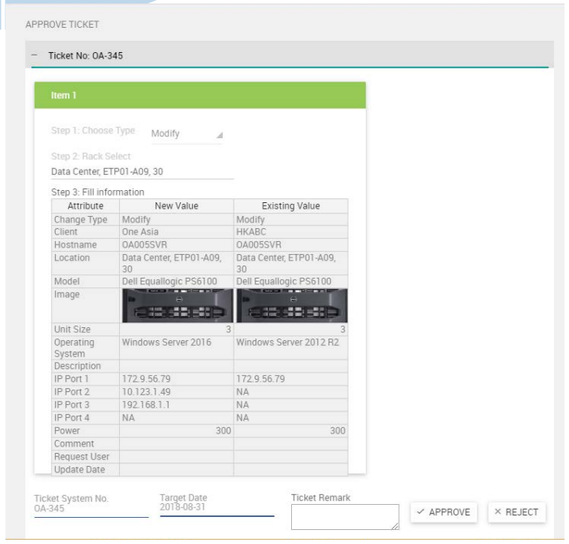
To avoid schedule conflicts, this interactive interface shows the past, future, and pending changes to assist with resource and workload balancing.

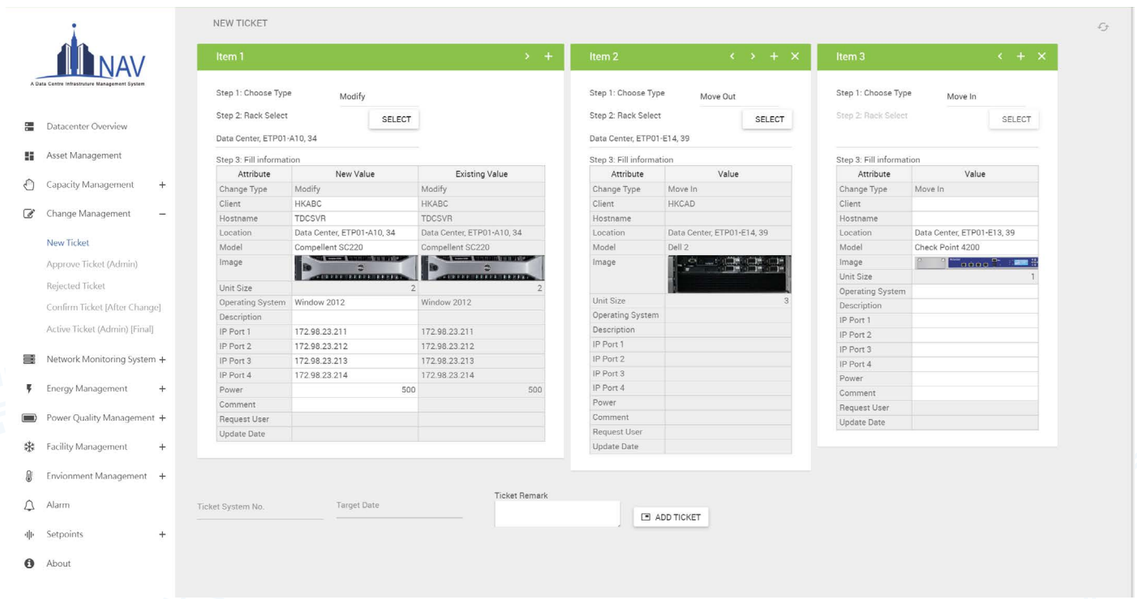
It can reduce human error, save time, and extend the life cycle of data center operation.

In addition, it can create work orders and automatically generate tasks to move, add or change IT and infrastructure equipment.

It also provides documentary reports on the working process and tasks procedures in real-time visuals.

- Built-in Change Management process for handling equipment move-in or move-out
- Automated action in updating the asset inventory record
- Documentation on add/move/change cycles to provide audit function





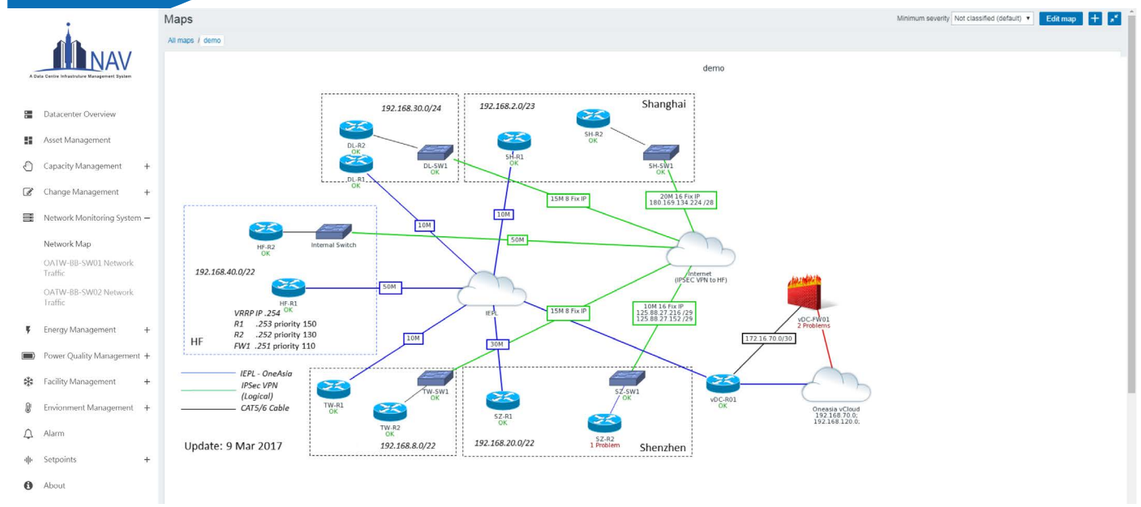
Network Management

An overview of the data center network paths and their interconnections. It provides guided input to avoid human error.

Live configured web dashboard displays customizable management level information. It can enhance the transparency of data center key performance indicators.

It generates specific activities to fulfill the needs of an individual work order, ensuring organizational policies as projects are easily applied to move, add, and change.

- Comprehensive dashboard with network topology sitemap
- Monitoring network traffic utilization, packet loss, and latency



Energy Management

This intelligent energy classification and management mechanism can perform energy measurement, PUE calculation, historical data analysis, and electricity tariff assessment.

It provides analysis of energy loss and cost, which helps develop greater agility to reduce the OPEX thus increases cost efficiency within the data center.

It provides both internal and external reports on current and historical PUE values, showing the effect of changing seasons.

- Verifiable real-time monitoring
- Branch Circuit Monitoring system (BCM)
  - Identifying problems, avoid branch circuit overloading
- Power Usage Effectiveness (PUE)
  - Consumed power allocation
- Integration with third-party enterprise and building management systems
  - Data gathering and customization, and integration of PUE calculations

Rack	Trip Enable	Max(A)	Overload(%)	Limit(A)	Reading(A)	kWh	Phase	Way		Way	Phase	kWh	Reading(A)	Limit(A)	Overload(%)	Max(A)	Trip Enable	Rack
ETP01-D02		13A	90%	11.7A	1.50A	124124kWh	L1				L1	124124kWh	4.20A	11.7A	90%	13A		ETP01-D05
ETP01-D03		13A	90%	11.7A	3.70A	352135kWh	L2	1		2	L2	0kWh	0.00A	11.7A	90%	13A		ETP01-D06
ETP01-D04		13A	90%	11.7A	0.00A	0kWh	L3				L3	0kWh	0.00A	11.7A	90%	13A		ETP01-D07
ETP01-D08		13A	90%	11.7A	0.00A	0kWh	L1				L1	0kWh	0.00A	11.7A	90%	13A		ETP01-D11
ETP01-D09		13A	90%	11.7A	5.10A	93843kWh	L2	3		4	L2	0kWh	0.00A	11.7A	90%	13A		ETP01-D12
ETP01-D10		13A	90%	11.7A	0.00A	0kWh	L3				L3	1251512kWh	1.40A	11.7A	90%	13A		ETP01-D13
ETP01-D14		13A	90%	11.7A	1.20A	124214kWh	L1				L1	0kWh	0.00A	11.7A	90%	13A		ETP01-E04
ETP01-E02		13A	90%	11.7A	0.00A	0kWh	L2	5		6	L2	0kWh	0.00A	11.7A	90%	13A		ETP01-E05
ETP01-E03		13A	90%	11.7A	0.00A	0kWh	L3				L3	0kWh	0.00A	11.7A	90%	13A		ETP01-E06
ETP01-E07		13A	90%	11.7A	0.00A	0kWh	L1				L1	0kWh	0.00A	11.7A	90%	13A		ETP01-E10
ETP01-E08		13A	90%	11.7A	2.10A	3255kWh	L2	7		8	L2	0kWh	0.00A	11.7A	90%	13A		ETP01-E11
ETP01-E09		13A	90%	11.7A	2.30A	255559kWh	L3				L3	0kWh	0.00A	11.7A	90%	13A		ETP01-E12
ETP01-E13		13A	90%	11.7A	0.00A	0kWh	L1				L1	0kWh	0.00A	11.7A	90%	13A		ETP01-E01
ETP01-E14		13A	90%	11.7A	0.00A	0kWh	L2	9		10	L2	0kWh	0.00A	11.7A	90%	13A		ETP01-D01
											L3	0kWh	0.00A	11.7A	90%	13A		
		13A	90%	11.7A	5.40A	124124kWh	L1											
		13A	90%	11.7A	5.10A	742kWh	L2	11										
		13A	90%	11.7A	4.70A	124125kWh	L3											

2018-05-14 14:50:26.060	AirCon	CRAC L21 01 Common Alarm	1	1		2018-05-14 14:51:03.247
2018-05-02 16:27:37.132	MSB	IU-L21-13-01 Alarm	0	0		2018-05-02 16:28:08.480

Power Quality Management

This Power Quality module provides visibility of the power chain in the data center. It enables power usage monitoring at a per-outlet level in real-time.

This allows timely decisions to be made by keeping loads balanced, assuring enough power is available where it is needed.

- Real-time monitoring of electrical systems power usage
  - UPS, switchboard, power network analyzer
- Generating an environmentally friendly power management

2018-05-14 14:50:26.060	AirCon	CRAC L21 01 Common Alarm	1	1		2018-05-14 14:51:03.247
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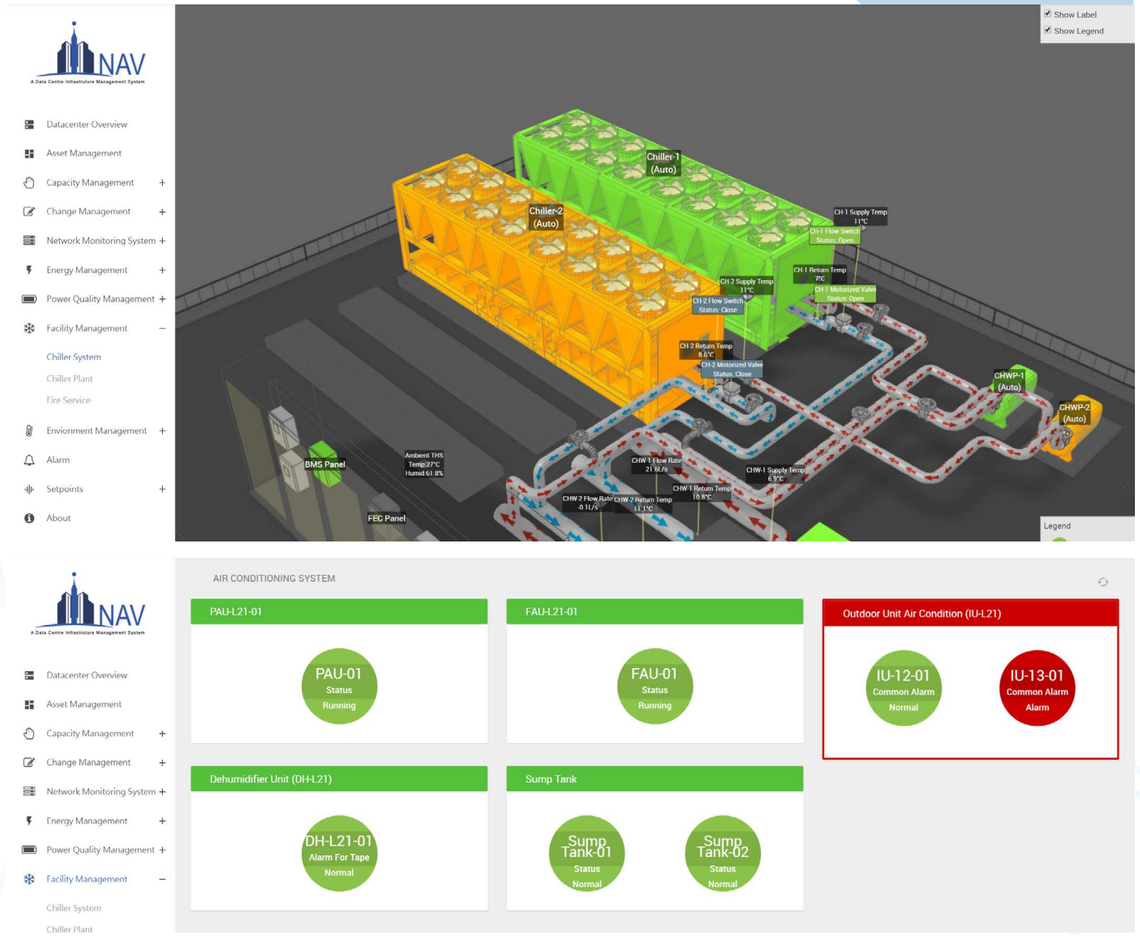
Main Plant Management

Provides clear visibility of all the components within the chiller plant system to manage the healthiness and effectiveness of the cooling system.

It aggregates, stores and correlates numerous static and dynamic data.

It demonstrates an easy to comprehend visual representation of the system status at any point in time.

- E&M facility's monitoring
  - Chiller operating status with alerts
- Centralized facility healthiness and alerts in a dashboard
  - Handling the chiller system and flow switch, CRAC, PAU and AHU status

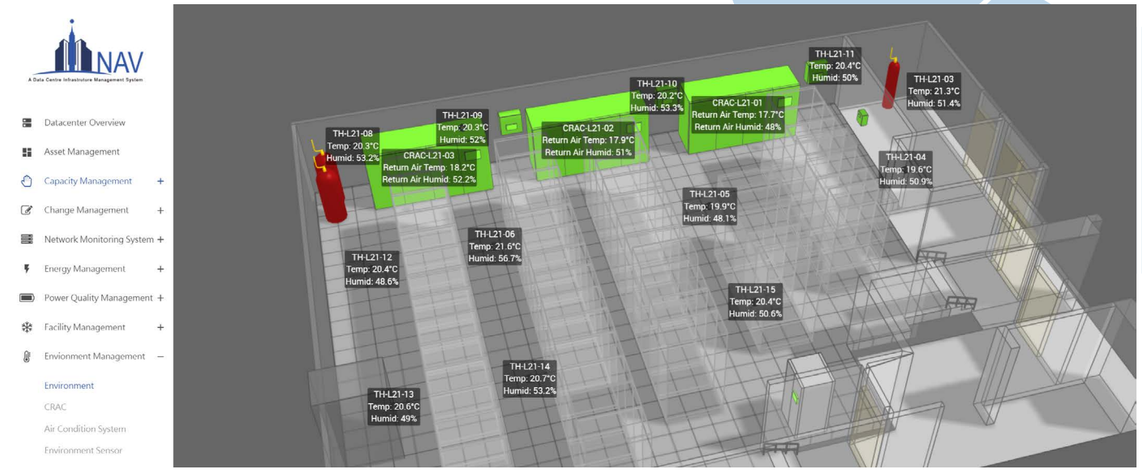


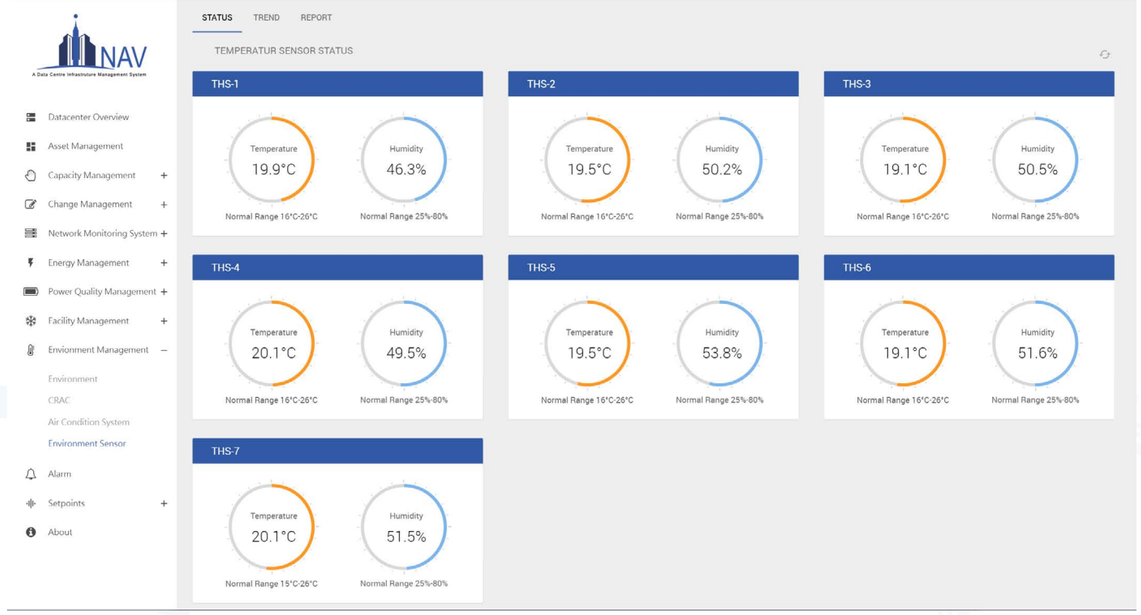
Environment Management

Provides the detailed reports and values for environmental monitoring. Any out-of-range variables inside the data center could lead to early failure of the equipment and poor utilization of resources.

Thus, having a fine grained analysis of the key variables in the data center environment can easily track and execute necessary changes.

- Real-time monitoring of the data center environment
  - Room temperature, humidity and CRAC status
- Centralizes environmental condition's data and delivers temperature and humidity status alerts





Newtech-Your Trusted Solution Provider

Riding on over 27 years' experience with worldwide customers' acclaim, Newtech has harnessed the latest technology to provide services that exceed customers' satisfaction.

Resilient Reporting Functions

Within the iNAV DCIM system, all dashboards displayed on the monitoring panel can be modified. Combining 3D editable visuals, we guarantee there is no latency on all modules management and modifications.

Enhancing Data Center Infrastructure Effectiveness

iNAV DCIM solution facilitates planning and control. It integrates relevant IT and Facility Management real-time information into useful analysis reports, whereby management level can further utilize for checking, comparison, and long-term assessment.

All-inclusive Turnkey Solution

Customers can be rest assured upon the system set up. Our experienced specialists provide simplified onboarding set up, data collection, and migration. If you are not familiar with iNAV DCIM, we will provide configuration guidance, comprehensive after-sales service, and system navigation.

Customized DCIM Service

Upon our professional assessment, a built-to-suit solution that is flexible and scalable will be proposed. Our system managers will provide proactive 7x24 monitoring while supporting up to a total of 500 racks round-the-clock issue solving service.

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