

Data Center Infrastructure Management System

iManager NetEco6000

Introduction

The NetEco6000 solution is the next-generation data center infrastructure management system developed by Huawei using intelligent technology. The NetEco6000 solution provides easy access to data center information and controls, with optimization analyses that maximize the efficiency of data center infrastructure.

System Concepts

Digital Maintenance

Smart devices combined with intelligent software dramatically improve O&M efficiency.

Intelligent Operation

Supporting U-position capacity management and tenant resource analysis, NetEco6000 simplifies use of data center resources.

AI Energy Analysis

Optimization of data center energy use based on AI technology reduces annual energy costs.

Security Protection

NetEco6000's security protection frame helps prevent network and data security issues.



Benefits



Digital Maintenance

10 years' labor cost

US\$2,000,000
(120 racks/person)



US\$873,000
(275 racks/person)



Intelligent Operation

10 years' rental revenue

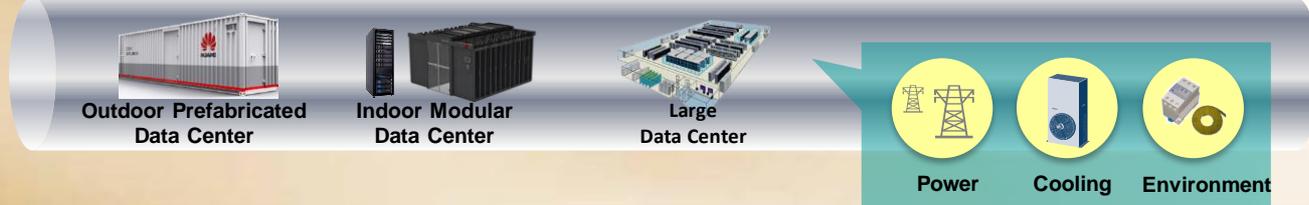
Rack resource usage increase
10% to 20%



US\$3,300,000
(1,500 racks)



Data Center Infrastructure Management System



Product Features

Digital Maintenance

Feature	Description	Advantage	Specification
O&M Overview	Provides O&M overview of DC	<ul style="list-style-type: none"> The O&M UI can be customized. 	<ul style="list-style-type: none"> The overview UI pages show data center KPIs on a multi-screen grid.
Real-Time Monitor	Provides real-time monitoring of data center facility	<ul style="list-style-type: none"> Power distribution & refrigeration systems show operating status 	Several views support efficient O&M: <ul style="list-style-type: none"> Device monitoring view Power distribution & refrigeration systems topologies Layout planning of data halls
3D View	Provides a 3D view of the data center	<ul style="list-style-type: none"> Integrated web 3D view in the monitor system 	<ul style="list-style-type: none"> Provides the 3D view of data center, micro-module NetEco6000 generates the 3D view automatically based on the layout of the data center.
Alarm Management	Views provide ways to deal with device alarms.	<ul style="list-style-type: none"> Supports alarm masking with multiple rules 	<ul style="list-style-type: none"> Supports browsing, inquiry, masking, redefinition, and threshold setting for each alarm Sends alarm remote notifications via SMS and email
Mobile Access	Supports access via mobile device	<ul style="list-style-type: none"> Monitors network security policies to help prevent intrusions 	<ul style="list-style-type: none"> Provides views of variables such as current alarms, real-time parameters, Power Usage Effectiveness (PUE), and energy consumption Supports transmission encryption, IMEI/MAC binding, and other network security policies
Temperature nephogram	Identifies hot spots through temperature field monitoring	<ul style="list-style-type: none"> The number of layers can be customized. 	<ul style="list-style-type: none"> Supports three layers of temperature nephogram Identifies top five hot spots and cold spots automatically
Daily Inspection	Computer room paperless daily report via mobile device	<ul style="list-style-type: none"> Fills inspection form with real-time monitoring data automatically 	<ul style="list-style-type: none"> The content and inspection routes for daily inspections can be customized. Daily inspection tasks and data can be accessed using mobile device. Automatically generates daily inspection reports
Electronic Maintenance	Electronic maintenance	<ul style="list-style-type: none"> Provides mobile App to simplify the O&M process 	<ul style="list-style-type: none"> Supports equipment maintenance management Supports planning and tracking of emergency drill Supports tracking and handling of maintenance ticket via mobile application
Risk Management	Tracks data center risks	<ul style="list-style-type: none"> Enables closed-loop risk management 	<ul style="list-style-type: none"> Creates risk tickets for the abnormal items in daily inspection reports Handles closed-loop tracking of risk tickets
Process Management	Maintenance process: ITIL standard	<ul style="list-style-type: none"> Supports user defined process 	<ul style="list-style-type: none"> Supports problem, event, and change process management Supports user-defined process configuration
Work Order	Work orders track daily operations and maintenance work	<ul style="list-style-type: none"> Creates alarm tickets directly from alarm pages 	<ul style="list-style-type: none"> Creates, dispatches, and tracks the alarm tickets Supports remote notification via email and SMS
Shift Management	Shift management of O&M engineer and team	<ul style="list-style-type: none"> Dispatches process task according to shift configuration 	<ul style="list-style-type: none"> Supports configuration of O&M engineer and team Supports configuration of team shift, and handover record

Product Features

Intelligent Operation

Feature	Description	Advantage	Specification
Capacity Analysis	Provides capacity overview of data center	<ul style="list-style-type: none"> Manages the power and network port of each device 	<ul style="list-style-type: none"> Supports capacity usage statistics, including rack space, load-bearing, power capacity, power ports, cooling capacity, and network ports Provides KPI dashboard and capacity reports
Device Installation Planning	Manages IT device install and un-install	<ul style="list-style-type: none"> Supports search for recommended installation location Provides U-position auto-discovery collectors Generates change ticket for device installation 	<ul style="list-style-type: none"> Supports the design of rack-mounted device install and un-install plans, including U-position, rPDU socket, and network port Supports recommended installation location search Supports automatic generation of work orders recording the installation date, location, equipment model, equipment installation, etc. Integrates with ITSM to exchange data requirements Automatically identifies changes of rack-mounted devices using U-position auto-discovery collectors
Inventory Management	Manages inventory information of IT and facility devices	<ul style="list-style-type: none"> Provides IT device library Manages devices in storage area 	<ul style="list-style-type: none"> Supports inventory management of IT and facility devices, including records of activities such as device install, transfer, uninstall, and maintenance Records attributes of assets such as device model, department, maintenance information, and user-defined attributes Provides IT device library showing the device models of the top manufacturers in the most recent 3 years
Tenant Resource Allocation	Allocates racks to specific users	<ul style="list-style-type: none"> Simplifies rack resource allocation 	<ul style="list-style-type: none"> Supports allocation and pre-allocation of rack and U-position resources Provides statistics of space resource allocations
Tenant Resource Analysis	Operation analysis based on tenant resources	<ul style="list-style-type: none"> Analyzes tenant groups Identifies abnormal tenants and most valuable tenants 	<ul style="list-style-type: none"> Tracks statistics and trends of data center resource occupancy rates Identifies tenants whose power consumption exceeds the contract limits Identifies valuable tenants whose resources are almost exhausted, or whose contract will soon expire
PUE Analysis	PUE analysis of data center	<ul style="list-style-type: none"> Provides PUE of each data hall and micro-module 	<ul style="list-style-type: none"> Supports PUE analysis of data center, data hall, and micro-module Generates an alarm when the PUE exceeds a specified threshold
Power Consumption Monitor	Real-time monitoring of device energy consumption	<ul style="list-style-type: none"> Supports energy monitoring of each rack and server 	<ul style="list-style-type: none"> Supports energy consumption monitoring and statistics of each data hall Supports energy consumption monitoring and statistics of each rack and server Calculates electricity costs based on the energy price

Product Features

AI Energy Analysis

Feature	Description	Advantage	Specification
Energy Chain Analysis	Identifies any abnormal points of energy efficiency	<ul style="list-style-type: none"> Provides cPUE analysis based on the energy chain 	<ul style="list-style-type: none"> cPUE analysis based on the energy chain identifies any abnormal points of energy efficiency. Analyzes UPS energy efficiency to determine UPS module sleep mode
iCooling (air-cooled)	Energy optimization for air-cooled systems	<ul style="list-style-type: none"> Optimizes cooling algorithm based on AI 	<ul style="list-style-type: none"> Adjusts the CRAC operation to reduce its energy consumption by 8%, accounting for factors such as IT load and temperature field
iCooling (water-cooled)	Energy optimization for water-cooled systems	<ul style="list-style-type: none"> Optimizes cooling algorithm based on AI 	<ul style="list-style-type: none"> Adjusts the chiller system operation to reduce data center energy consumption by 8% Compatible with TOPN BMS system

Product Modules

Catalogue	Module	Features
Basic Functions	Core Program	<ul style="list-style-type: none"> O&M overview, real-time monitor, and alarm management
Optional Functions	3D View	<ul style="list-style-type: none"> 3D view
	Energy Efficiency Management	<ul style="list-style-type: none"> PUE analysis and power consumption monitor
	Cooling Optimization	<ul style="list-style-type: none"> iCooling (air-cooled) and iCooling (water-cooled)
	Inventory Management	<ul style="list-style-type: none"> Inventory management
	Capacity Management	<ul style="list-style-type: none"> Capacity analysis and device installation planning
	Tenant Management	<ul style="list-style-type: none"> Tenant resource analysis and tenant resource allocation
	Paperless Inspection	<ul style="list-style-type: none"> Daily inspection and risk management
	Electronic Maintenance	<ul style="list-style-type: none"> Electronic maintenance and process management
	Shift Management	<ul style="list-style-type: none"> Shift management
	Work Order	<ul style="list-style-type: none"> Work order
	Temperature Nephogram	<ul style="list-style-type: none"> Temperature nephogram
	Mobile App	<ul style="list-style-type: none"> Mobile access

General Disclaimer

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