Data Centre Monitoring Solution Guide

Energy and environmental monitoring is the challenge

Environmental monitoring in data centres is becoming increasingly vital as energy consumption keeps rising and the demands to keep systems running reliably becomes critical to business survival. Energy consumption in individual data centres has doubled in the last five years and is set to double within the next

Measurement is the problem

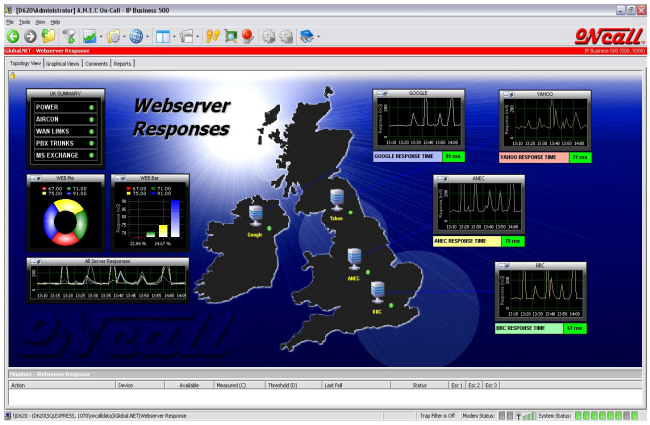
Obtaining detailed measurements in real time has been a major constraint in achieving a true picture of the dynamic environment in a typical data centre. Traditional hard wired retrofit approaches are generally too expensive or disruptive to install whilst portable data logging is only suit-

Wireless is the answer

A wireless sensor network solution allows important parameters such as power, temperature, humidity, and chilled water flow to be easily and continuously monitored. The self-forming, self-healing features of wireless mesh networks also allow monitored points to be changed or added without the need for specialist

Key solution features include:

- Energy consumption
- Rack conditions including temperature & humidity
- Cooling status and efficiency
- Site power and UPS status
- Status of devices and processes
- Systems availability
- WAN/LAN circuit and network service status
- Key performance indicators and trends



Wireless Sensor Network

The self-healing, self-forming features of wireless mesh sensor networks and battery powered sensors make installation quick and flexible whether for permanent use or temporary auditing spot checks.

Monitor multiple parameters

Wireless sensor nodes are available for monitoring temperature, humidity, chilled water flow and energy, electrical energy consumption, air pressure, air quality, dust, water leak, smoke detection, occupancy.

Monitoring and control options

The wireless network can be used either as a standalone monitoring or control system or by interfacing with an existing BMS or SCADA system.

Standalone or integrated solutions

Wireless systems allows sensor data to be integrated into existing monitoring systems. If standalone is preferred Adaptive can supply a complete system including OnCall software which monitors the complete spectrum of IT and environmental control equipment.

Wireless System Interface Options

Data centre environment data can be easily integrated with virtually any building automation system or network monitoring application through wireless LON, Modbus, BACNet, SNMP or direct I/O interfaces.

OnCall Real Time Monitoring Software

OnCall monitors the whole spectrum of IT infrastructure and supporting utility services from chip to chiller, including network services, providing continuous information about energy consumption, availability status, and performance.

All devices, all protocols

OnCall is a highly scalable Windows Client/Server system designed to capture sensor metrics from common but diverse infrastructure and plants. OnCall communicates simultaneously with gateways and appliances connected to local area networks using TCP/IP protocols.

Alarms and alerts

With fully configurable alarm thresholds and auto recovery with SMS and E-mail notification, OnCall is a powerful real-time monitoring tool. An alarms viewer allows full post mortem analysis of incidents.

Topology views

Enables real time data to be displayed in a user defined view by dragging and dropping values into a diagram or picture.

Data analysis

Integrated Crystal Reports run-time enables user defined reports to run within the system.

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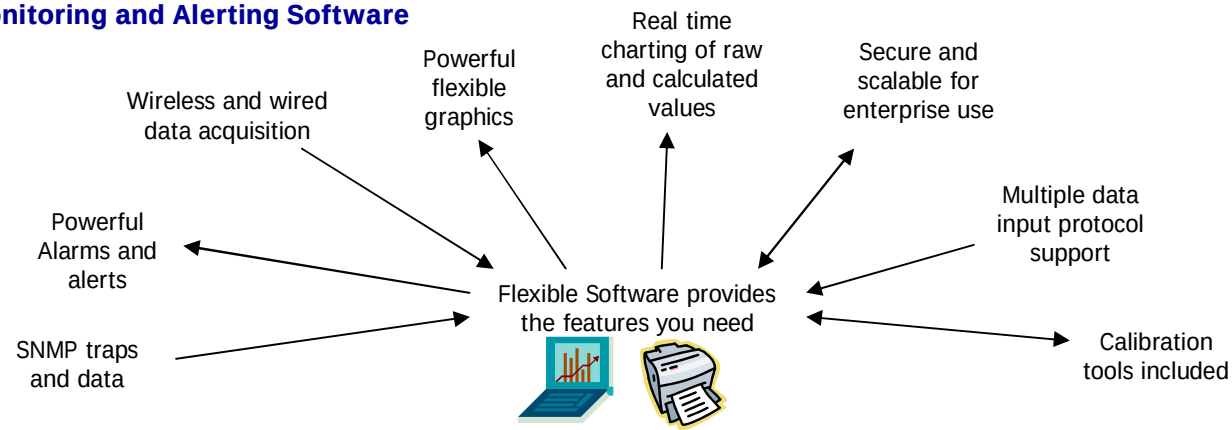
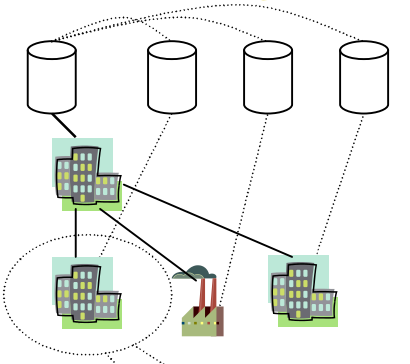
Comprehensive. Flexible. Integrated

Monitoring and Alerting Software



Single or multiple on-site or hosted databases connected via Internet, WAN or GPRS.

Single facility, campus or multiple sites. Central and site-level data management and reporting



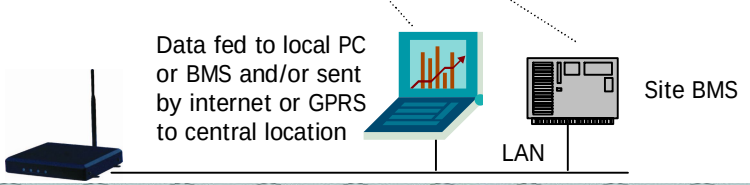
Data Centre Data Acquisition at site level

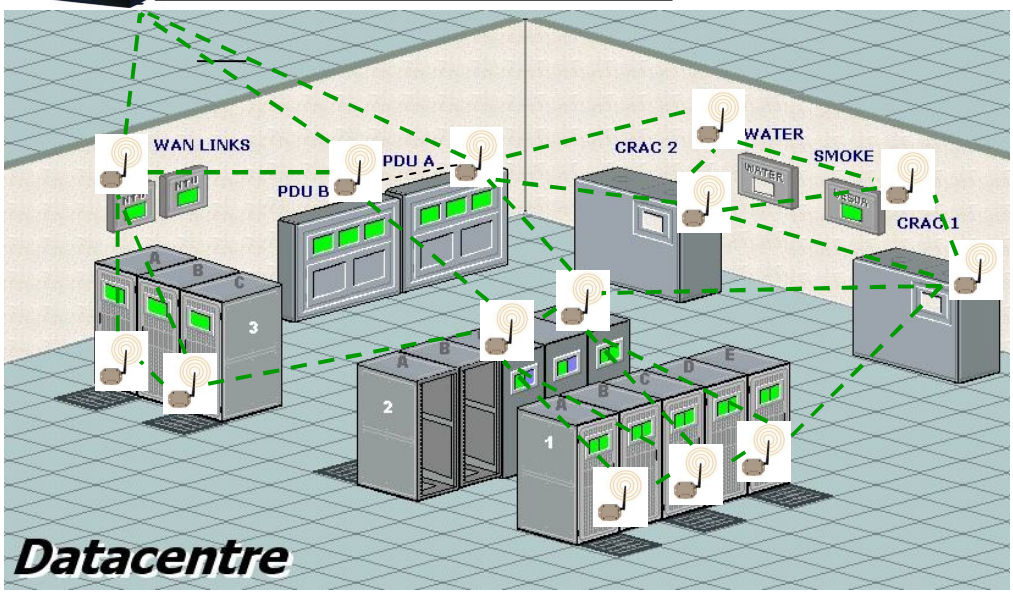
Local wireless gateway to BMS or Monitoring software

Wireless mesh network connects sensors to wireless gateway

Wireless, wired or LAN-connected local telemetry

One to hundreds of sensors per site. Additional sensors easily added at any stage.





Wireless Sensors available for:

Temperature, Humidity, Electrical Power, Chilled water flow and cooling energy, Air quality, Dust, Sub-floor air pressure, Occupancy, Water leaks, Smoke

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