NUCLEUS for Security Management

Ensure secure premises, keeping track of personnel

Data servers are kept in rack halls fitted with CCTVs and access control management system. Upon detecting intrusion, NUCLEUS alerts operator to the incident site and enables him to call up nearby cameras for a holistic view. Based on RFID location information in NUCLEUS, he can then dispatch the nearest security officers to the scene to apprehend the intruder.

Video analytics for round-the-clock active surveillance

Video analytics are applied on CCTVs to actively monitor premise for suspicious activities such as unwanted baggage, suspicious crowd movement, loitering etc. NUCLEUS flags detected plausible case of suspicious activity to operator, who can then dispatch the nearest security guard to assist in further verification or take necessary actions.
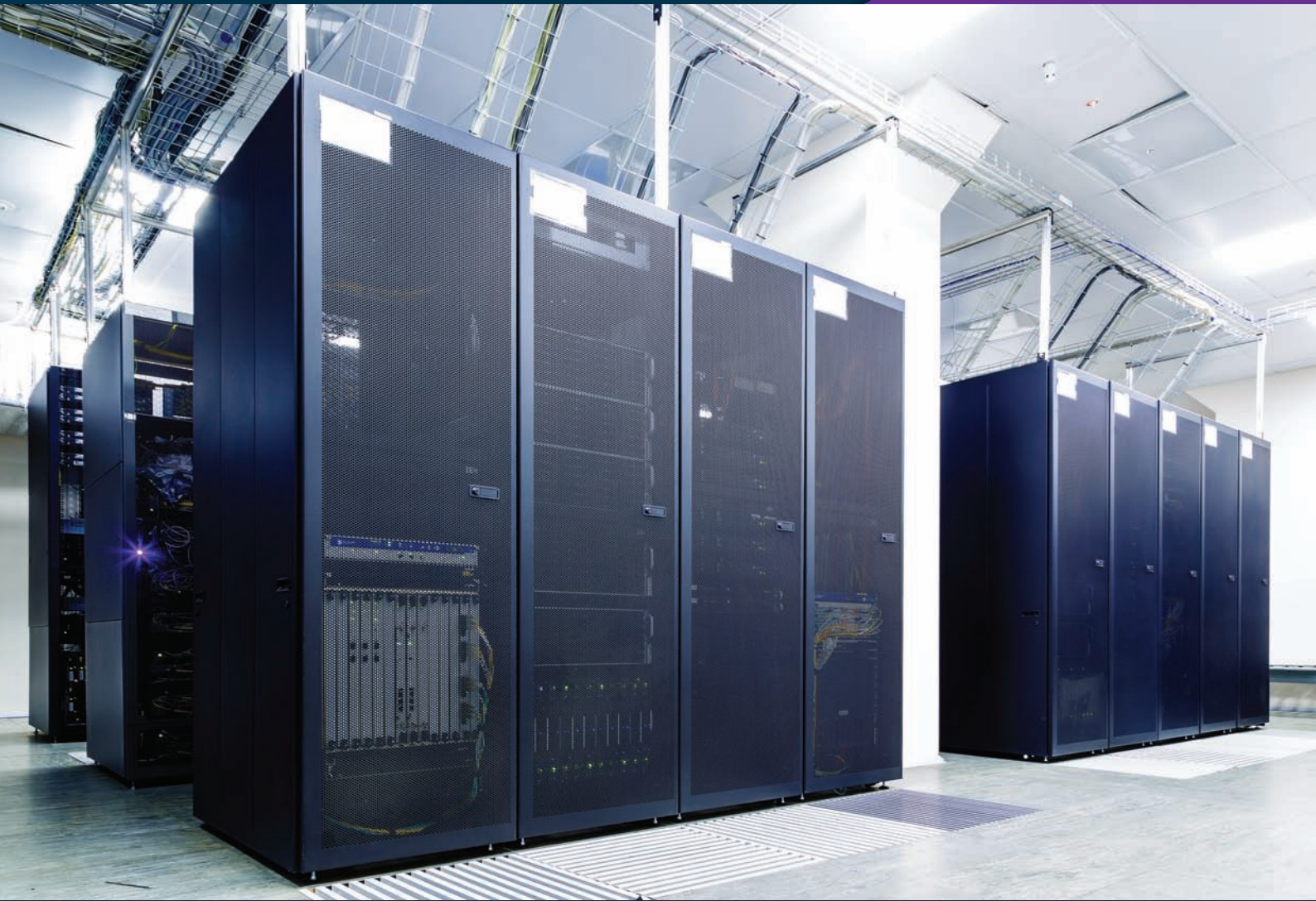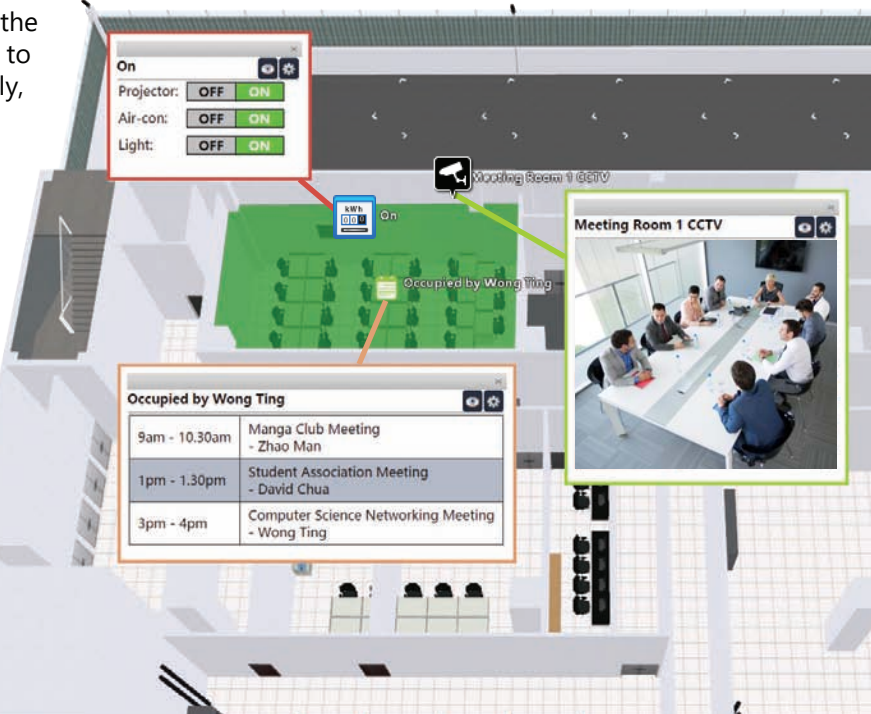
NUCLEUS for Facilities

Optimise facilities usage and reduce energy wastage

NUCLEUS assists the operator in visualizing data from the building management system. This helps the operator to identify problems and rectify them immediately, reducing resource wasting incidents.

For example, NUCLEUS allows the operators to switch to energy saving mode during non-peak hours, where motion sensors control the lights, so that unused rooms' lights turns off automatically to save energy.

Commonly shared facilities such as meeting rooms can be booked through systems for better transparency, so that facilities usage is optimised. Through NUCLEUS, users can communicate with the IoT devices in the rooms to easily control environmental settings such as lighting and room temperature.

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NUCLEUS

3D Unified Management System for Data Centres

With the rapid advancement in information technology, data storage needs are expected to grow exponentially. Data centres are increasingly facing challenges to ensure that critical IT systems remain available and reliable while continuously expanding the capacity and keeping cost and energy usage to the minimum. With NUCLEUS, traditional data centre management function is expanded to include all of the physical assets and resources, integrating information technology, building facilities, security and energy management disciplines to centralise monitoring, management and capacity planning of a data centre. Through a single unified platform where relevant parties get a superior situational awareness for better response to notifications, alarms and emergencies, the data centre is kept secured and "green", enabling optimal cost-saving safe operations.

www.nucleussense.com

NUCLEUS

NUCLEUS for Executive Management

Unifying systems for efficient management

As a Unified Management System, NUCLEUS overlays information from multiple systems into one 3D environment, providing real-time situational awareness of the entire premise. This paints an accurate picture of the situation on the ground and allows the supervisor to make an executive decision quickly and efficiently.
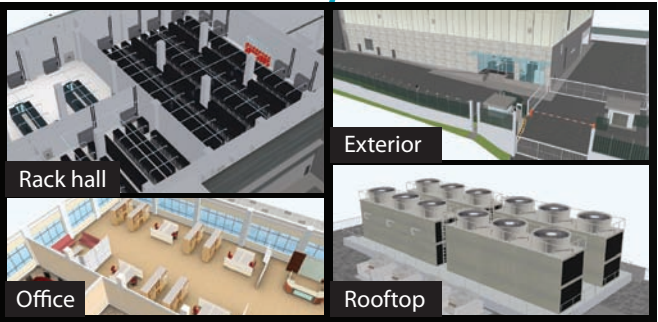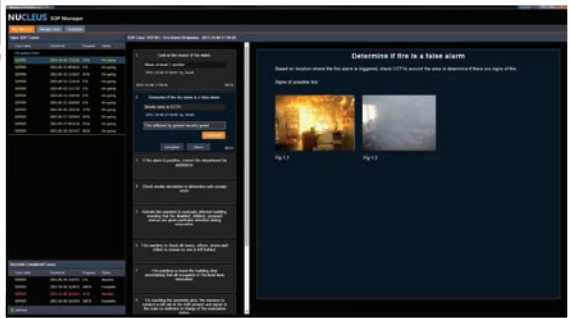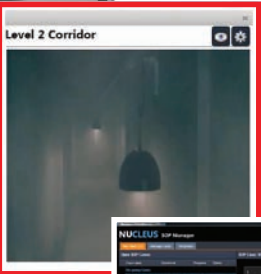
NUCLEUS for Data Centre Operations

Unifying systems for efficient management

NUCLEUS's ability to unify information from various systems onto one platform, provides operators with a holistic real-time view of their premises. With NUCLEUS, operators can retrieve information from sub-systems through one unified interface, thus reducing the number of systems to be trained in, increasing flexibility in manpower deployment during operations.

Executive summary of data centre's overall efficiency

Through NUCLEUS's single interface, the supervisor can retrieve building management system, power monitoring system and video management system statistics of the data centre. This allows him to easily determine if the data centre is running at optimal efficiency.

Executive summary of data centre capacity

With NUCLEUS 3D display dashboard, the supervisor can easily determine the remaining free capacity of the data centre. Together with analytics and NUCLEUS's planning tool, the data centre supervisor can also predict when the data centre will run out of capacity, and plan where to best place new servers.

Device Error!
Control: 51.72%
Feedback: 25.81Hz
In:
Out:
CWS: 34°C 28.8°C 28.86°C
High

"Whole-of-building" management

From the cooling tower, to the chiller plant, down to individual room or even rack temperatures, NUCLEUS allows operators to easily monitor the entire chilling system and be informed when any part of the system fails (E.g. water leak in rack hall).

Level 2 Corridor

Rack hall
Exterior
Office
Rooftop

Impressive showcase of data centre to VIPs

Using NUCLEUS's multi-site management interface, executive management can bring VIPs on a virtual tour to showcase key areas of any data centres which they owned and highlight the cutting edge technologies being used.

Energy management system

Combined with a power monitoring system, NUCLEUS helps operators to measure energy usage, enabling safe operations at higher densities. By analyzing energy consumption data, data center can improve energy usage efficiency, lowering overall operating cost.

Digital scenario manager

Using NUCLEUS's digital scenario manager module, operators can respond to emergencies faster and more efficiently. For example, in case of fire in the server room, the scenario manager is able to utilize CCTVs and ground crew to verify location and size of fire, while guiding the operator to engage in the fire fighting and evacuation procedures. The actions taken are recorded with time stamp, for easy auditing.