



Data Centre NOC Operator Course: Power, Cooling and Sensor Alarms



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Data Centre NOC Operator Course: Power, Cooling and Sensor Alarms is a 1-week course for new data centre operations, critical facilities and monitoring staff that ends with a Data Hall Watch Logbook and Alarm Response Card Set. The organisation gains operators who read UPS, PDU, cooling and environmental sensor alarms correctly and act within their authority. CoreConcept Training Center delivers this data centre NOC operator course.

Introduction

Data halls rarely fail because of one large event; they fail when a UPS on battery, a cooling unit in fault or a rising rack inlet temperature is noticed late or misread by the person on the console. Operators who cannot tell a nuisance sensor reading from a genuine thermal or electrical threat either call out engineers needlessly or wait too long. Nominees already work in or have just joined a data centre operations or monitoring role. Teaching runs as a simulation on BMS, EPMS and DCIM console screens, single-line diagrams and sensor data from colocation, enterprise and telecom facilities.

Course Objectives

- Read single-line diagrams to trace utility, generator, UPS and PDU paths feeding a rack
- Interpret UPS, static switch and PDU branch circuit alarms and judge their effect on rack redundancy
- Monitor CRAC and CRAH units, chilled water readings and rack inlet temperatures against ASHRAE thermal guidelines
- Respond to leak, smoke, humidity and door access sensor events with the correct emergency operating procedure
- Record facility readings, events and actions in a structured watch log and facility ticket
- Compile a Data Hall Watch Logbook and Alarm Response Card Set for a case facility

Target Audience

- Operators newly assigned to watch data hall power, cooling and environmental consoles
 - Critical facilities technicians who take first action on electrical and mechanical alarms
 - IT operations staff moving into colocation or enterprise data centre monitoring duties
 - Security and building control room staff who share watch duties over data halls
 - Junior site support staff who carry out walk rounds and sensor checks
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Course Outline

Day 1: Data Centre Facility Layout and Critical Infrastructure

- Data Hall Layout With Hot Aisle and Cold Aisle Zones
- Single-Line Diagram Reading From Utility to Rack
- Redundancy Labels N, N+1 and 2N in Plain Terms
- BMS, EPMS and DCIM Console Roles Compared
- Facility Walk Round Route and Reading Sheet

Day 2: Power Chain Monitoring From UPS to Rack PDU

- UPS Modes Including Online, Bypass and Battery Operation
- Battery String Readings and Autonomy Time Warnings
- Static Transfer Switch and Generator Start Signals
- Rack PDU Branch Load and Breaker Trip Alarms
- Power Alarm Severity Card for Console Operators

Day 3: Cooling and Thermal Monitoring in the Data Hall

- CRAC and CRAH Unit Status and Fault Codes
- Chilled Water Supply and Return Temperature Readings
- ASHRAE Thermal Guidelines for Rack Inlet Temperature
- Airflow Problems Such as Bypass and Recirculation
- Thermal Map Review Using DCIM Sensor Overlays

Day 4: Environmental Sensors, Safety Events and Procedures

- Water Leak Detection Cable and Zone Alarm Response
- Smoke Detection and Fire Suppression Panel Indications
- Humidity and Dew Point Excursion Handling
- Emergency Operating Procedure and Method of Procedure Use
- Facility Ticket Writing for Electrical and Mechanical Events

Day 5: Simulation: Data Hall Watch and Alarm Response

- Simulated UPS on Battery Event With Generator Start
 - Simulated Cooling Unit Failure and Rising Inlet Temperature
 - Simulated Leak Alarm Under a Raised Floor
 - Watch Log Entries Peer Check Against Simulation Records
 - Data Hall Watch Logbook and Alarm Response Card Set Completion
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Skills You Will Gain

- Single-Line Diagram Reading
- UPS and PDU Alarm Interpretation
- Cooling System Status Monitoring
- Thermal Excursion Recognition
- Environmental Sensor Response
- Facility Watch Logging
- Emergency Procedure Execution

Why Attend This Course

- Deliver a Data Hall Watch Logbook and Alarm Response Card Set to the data centre operations supervisor and the critical facilities engineer
- Judge whether a power, cooling or sensor reading calls for observation, a facility ticket or an immediate emergency procedure
- Reduce the risk of rack outages and thermal shutdowns caused by late or misread facility alarms
- Coach newer colleagues on walk round routes, console screens and response cards practised in the simulation

Conclusion

Back at work, the participant hands the Data Hall Watch Logbook and Alarm Response Card Set to the data centre operations supervisor and the critical facilities engineer. They use it to agree which power, cooling and sensor alarms the console operator handles alone and which trigger an engineer call-out or an emergency procedure. After the first month of use, the site should compare logged events with engineer reports, correct any card that led to a late or unnecessary call-out and update the walk round route.

Nomination FAQs

Which roles should an organisation nominate for the data centre NOC operator course?

Organisations should nominate operators who watch data hall power, cooling and environmental consoles, critical facilities technicians taking first action on alarms, and IT or control room staff moving into data centre monitoring duties.

What should nominees already do at work before the data centre NOC operator course?

Nominees should already work in, or have just joined, a data centre operations, facilities or monitoring role. No electrical or mechanical engineering qualification is expected; the first day explains the facility layout and diagrams used later.

What does the organisation receive after the data centre NOC operator course?

The organisation receives a Data Hall Watch Logbook and Alarm Response Card Set covering UPS, PDU, cooling, leak, smoke and humidity events, ready for the operations supervisor to adapt to its own facility.

Which guidelines does the data centre NOC operator course follow for power and cooling alarms?

The course follows ASHRAE thermal guidelines for rack inlet temperature and common data centre practice for redundancy labels, emergency operating procedures and method of procedure documents, applied through BMS, EPMS and DCIM console work.
