Certified Data Center Facilities Operations Manager (CDFOM) HK763S

In this course, students will gain knowledge of managing data center operations from planning to monitoring and reporting. It breaks down the complexity of managing a mission-critical data center facility into manageable and systematic processes.

Audience

The primary audience for this course is an IT, facilities or data center operations professional working in and around the data center (representing both end-customers and or service provider/facilitators) and having responsibility to achieve and improve high availability and manageability of the data center.

Prerequisites

It is advisable for the participants to have some experience in data center operations although it is not required. It is highly recommended to attend the CDCP course (HK258S) before attending the CDFOM course.

Course objectives

After completion of the course, the attendee will be able to:

- Set up a data center facilities operations team.
- Manage and motivate your facilities management team.
- Set up SLAs and manage them including liabilities, KPIs etc.
- Manage vendors and measure their performance.
- Manage physical security taking into account requirements of standards such as ANSI/TIA-942 etc.
- Manage safety and statutory requirements.
- Effectively and efficiently manage data center operations.
- Manage documents.
- Set up equipment lifecycle including testing.
- Define data center design limits, and set up and manage a proper capacity management plan.
- Commission and de-commission equipment.
- IT cable management.
- Manage the day-to-day data center operations.

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# Detailed course outline

## The data center operations team
- Leadership criteria and attributes
- How to set up an efficient and effective facility management operations team structure
- Defining roles, responsibilities, and skill metrics
- Key Performance Objectives (KPO) and appraisals
- Job rotation, reward, promotion, and succession planning as strategies to grow and retain talent
- Training and assessments
- Shift management, scheduling, and roster planning

## Vendor management
- Vendor selection and qualification
- Managing risk and dealing with non-compliance, public liability, legal, escalation, and complaint procedures
- Key considerations of a vendor agreement for services
- Performance measurement and reporting

## Facilities maintenance
- Maintenance options
- Main considerations for maintenance agreements
- The practicality in deciding between comprehensive/non-comprehensive maintenance regimes
- Warranty pitfalls
- Service reports alignments with maintenance agreements
- Tiered maintenance considerations
- Preventive, predictive, condition, and Reliability Centered Maintenance (RCM)
- Managing onsite/offsite spares and how to determine which spares to keep onsite

## Managing safety and statutory requirements
- Statutory and industry compliance/regulations
- Emergency response and safety policies and procedures
- PTW (Permit To Work) requirements and procedures
- General rules and regulations for the data center
- Ergonomic workspace
- SOP's for power outage, fire, bomb threat etc.

## Service Level Agreement (SLA) management
- Defining the data center design limitations
- Defining measurement criteria and reporting
- Alignment of business SLA with vendor SLA
- Defining change management procedure for installation and de-installation of new equipment
- Reporting and escalation management

## Managing physical security
- Guidelines from standards; ANSI/TIA-942, ISO/IEC-27001/02, SS507
- SOP (Standard Operating Procedures) in managing day-to-day security access control, such as:
  - Entry/Exit control and access management
  - Permit To Work (PTW) and contractor work in progress
  - Delivery of goods
  - Customer access
- Effective patrols routing and how to ensure 24x7 vigilance
- Handling external threats; Crisis/Emergency situations
- Security incident management

## Managing daily data center operations/Floor management
- ITSM/ITIL (IT service management) in the data center
- Shift hand-over requirements and procedures
- Asset and inventory management for hardware, software, spares, consumables, etc.
- Floor management procedures and duties such as rack space allocations, management of installers
- Pre-installation analysis for power, cooling, weight, EMF, fire protection, and other influencing factors
- From truck to rack
- Handling of incoming equipment
- Inspection, unpacking, and security procedures
- Staging procedure and requirements
- Equipment movement into the computer room
- Finishing up the installation
- De-installation/Commissioning procedures
### Course data sheet

#### Capacity management
- Defining the design limits of the data center
- Setting up thresholds, monitoring, and reporting
- Business review and future capacity planning
- Technical solutions aiding capacity planning such as Computational Fluid Dynamics (CFD), capacity, and configuration management solutions

#### Cable management
- Overview of ANSI/TIA-942, ANSI/TIA-606 requirements
- Cabling specification and labelling based on ANSI/TIA-606
- In-rack power and network cabling
- Labelling requirements
- Cabling/Cable tray layout documentation

#### Data center cleaning and pest control
- Types of pollution found in data centers such as H2S, air-particulates, etc.
- Common causes of pollution in the data center
- Standards, policies, and techniques to reduce and cleanup dust, pests, and other pollution and disturbances

#### Data center monitoring and automation
- Data center monitoring requirements
- Threshold setting and reporting requirements
- Notification and escalation requirements
- Automated 24 hours helpdesk ticketing systems
- Incident and customer complaint management, and change management
- Performance measurement and monitoring requirements such as fuel and water consumption, PUE/DCIE etc.

#### Managing documentations/Archives
- Document management standards
- Document management process requirements
- Minimum and desired design documentation set
- Operational management documents

#### Equipment lifecycle management
- Policies and procedures governing lifecycle management
- Asset management including software and firmware
- Service situations
- Review, triggers, and reporting
- Test lifecycle

### Mock exam

**EXAM: Certified Data Center Facilities Operations Manager**

**Examination accredited by EXIN**

Attendees will take a one and a half hour, 60 questions, closed book, and multiple choice based exam. The candidate requires a minimum of 45 correct answers to pass the exam. Attendees passing the exam will be awarded the internationally accredited and recognized “Certified Data Center Facilities Operations Manager” certificate (CDFOM). The certification is valid for three years after which the student needs to re-certify.

Learn more at [hpe.com/ww/learndatacenter](http://hpe.com/ww/learndatacenter)

**Recommended next courses**

CDCP Certified Data Center Professional (HK258S) builds upon knowledge gained in CDFOM, which exposes participants to the key components of the data center.

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