



## CERTIFIED DATA CENTRE FACILITIES OPERATIONS MANAGER

### Introduction

Managing the facilities of today's high-end and high-availability data centres is an extremely demanding and complex task which is often underestimated. There is often very little appreciation and understanding of the complexities of managing today's mission-critical data centres, especially since many of the data centres are operating at, or near, their design limits and downtime is never an option. The way a data centre is managed at the facilities layer makes all the difference. Even a data centre designed to the highest redundancy level as per the ANSI/TIA-942 standard could still experience many unscheduled downtime events due to poor planning, operations, maintenance and management processes.

The Certified Data Centre Facilities Operations Manager course is a three-day course which will enable participants to gain in-depth knowledge of managing data centre operations from planning to monitoring and reporting. This course breaks down the complexity of managing a mission-critical high-availability data centre facility into manageable and systematic processes. Not only are the topics covered based on international standards, the course includes best-practises by seasoned data centre professionals with many years' experience managing global data centre facilities. The CDFOM® is an intensive course packed with a lot of information which brings tremendous value to the participants, enabling them to improve the operations of their data centre.

### Roadmap



### Audience

The primary audience for this course is any IT, facilities or data centre operations professional who works in and around the data centre, who has the responsibility to achieve and improve the high availability and manageability of the data centre operations.

### Prerequisites

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

### Global Accreditation & Recognition



### Course Benefits

After completion of the course the participant will be able to:

- Setup a data centre facilities operations team
- Manage and motivate your facilities management team
- Setup SLA's and manage them including liabilities, KPI's etc.
- Manage vendors and measure their performance
- Manage physical security taking into account requirements of standards such as ANSI/TIA-942 etc.
- Manage safety & statutory requirements
- Effectively and efficiently manage data centre operations
- Manage documents
- Setup equipment life cycle including testing
- Define data centre design limits and set-up and manage a proper capacity management plan
- Commission and decommission equipment
- IT cable management
- Manage the day-to-day data centre operations

- **The Data Centre Operations Team**
  - Leadership criteria and attributes
  - How to set-up 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 pit falls
  - Service reports alignments with maintenance agreements
  - Tiered maintenance considerations
  - Preventive, Predictive, Condition and Reliability Centred (RCM) based maintenance
  - Managing on-site/off-sites spares and how to determine which spares to keep on-site
- **Managing Safety & 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 centre
  - Ergonomic workspace
  - SOP's for power outage, fire, bomb threat etc.
- **Service Level Agreement (SLA) Management**
  - Defining the data centre 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
    - Etc.
  - Effective patrols routing and how to ensure 24x7 vigilance
  - Handling external threats; crisis/emergency situations
  - Security incident management
- **Managing Daily Data Centre Operations/Floor Management**
  - ITSM/ITIL (IT service management) in the data centre
  - 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
- **Capacity Management**
  - Defining the design limits of the data centre
  - 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 & labelling based on ANSI/TIA-606
  - In-rack power and network cabling
  - Labelling requirements
  - Cabling/cable tray layout documentation
- **Data Centre Cleaning and Pest Control**
  - Types of pollution found in data centres such as H2S, air-particulates etc.
  - Common causes of pollution in the data centre
  - Standards, policies and techniques to reduce and cleanup dust, pests and other pollution and disturbances
- **Data Centre Monitoring and Automation**
  - Data centre monitoring requirements
  - Threshold setting and reporting requirements
  - Notification and escalation requirements
  - Automated 24hrs helpdesk ticketing systems
  - Incident and customer complaint management & 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 Life-Cycle Management**
  - Policies and procedures governing life cycle management
  - Asset management including software and firmware
  - Service situations
  - Review, triggers and reporting
  - Test life cycle
- **Mock Exam**
- **EXAM: Certified Data Centre Facilities Operations Manager**



## Delivery structure

EPI courses are lectured by certified trainers. CDFOM® is an instructor-led course that uses a combination of lectures and question-and-answer sessions to discuss participants' specific needs and issues experienced in their own environment. Participants are able to tap into the trainer's extensive experience to enable them to solve practical problems in their current environment, thus adding tremendous value.

## Examination

Certification exams are administered at the end of the last training day by an authorised training partner, either using paper-based or online format, depending on the country in which the course is delivered. The exam is a 90-minute closed book exam, with 60 multiple-choice questions. The candidate requires a minimum of 45 correct answers to pass the exam. Online exam results are known immediately and paper-based exam results will be known within one week.

## Certification

Candidates who successfully pass the exam will receive the official 'Certified Data Centre Facilities Operations Manager' certificate. The certification is valid for three years after which the student needs to re-certify. More information is available on the EPI corporate website at [www.epi-ap.com](http://www.epi-ap.com).

## Global Accreditation & Recognition

EXIN, is a global, independent and not-for-profit examination provider. EXIN's mission is to improve the quality of the IT and data centre sectors, the proficiency of IT and data centre professionals and the IT users, by means of independent testing and certification. EXIN offers candidates the opportunity to take examinations at a time and place of their choice. Every day, EXIN examinations are taken in more than 125 countries on six continents, and in more than 15 languages.

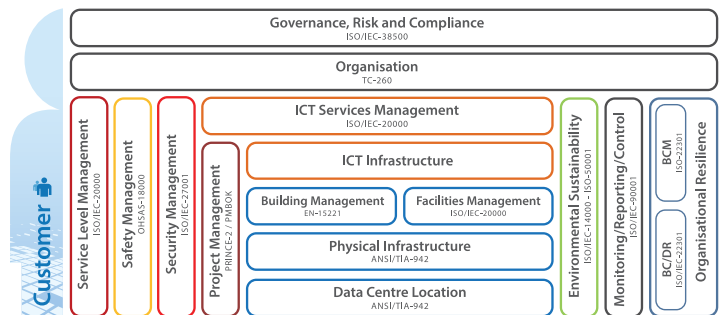
## Recommended next course

To further extend your skills in the data centre design arena, we recommend the CDCP® course. CDCP® builds upon knowledge gained in CDFOM® which exposes participants to the key components of the data centre. For the full course outlines of this and other courses, visit EPI corporate website [www.epi-ap.com](http://www.epi-ap.com).

## Course schedule

Our courses are available in over 50 countries across all continents. For a comprehensive course schedule, visit the EPI corporate website at [www.epi-ap.com](http://www.epi-ap.com) or contact your local authorised reseller/partner.

## EPI Data Centre Framework®



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The EPI Data Centre Framework® provides data centre investors/owners/operators with a data centre ecosystem addressing all disciplines of a structured and fully managed data centre. The EPI Data Centre Framework® addresses not only the site selection, design and outfitting of its physical facilities but it also includes the governance and all processes required to organise and operate a data centre which meets the business requirements of its customers. For more information visit [www.epi-ap.com](http://www.epi-ap.com).



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