Mission Critical Site Facilities Training

CDFOM®

Certified Data Centre Facilities Operations Manager

Introduction

Managing the facilities of today's hi-end and hi-availability data centers is an extremely demanding and complex task which is often under estimated. There is often very little appreciation and understanding of the complexities of managing today's mission critical data centers especially since many of the data centers are operating at, or near, their design limits and downtime is never an option.

The way a data center is managed at the facilities layer makes all the difference and even a data center designed to Tier-4 as per the ANSI/TIA-942 standard could still experience many unscheduled down time events due to poor planning, operations, maintenance and management processes.

CDFOM

The CDFOM course is a 3 days course after which participants will have gained in-depth knowledge in managing data center operation which includes the following key subject matters such as; Capacity planning, latest Green initiatives, how to properly commission and de-commission equipment, Compliance to Safety Standards, Statutory Compliance and International Standards, Managing People, Vendor Management, handling Incident/Crisis Management as well the how to keep operations really simple, manageable, effective and efficient and much more.

Audience

The primary audience for this course is an IT, Facilities or Data Center Operations professional working in and around the data center and having responsibility to achieve and improve hi-availability and manageability of the data center.

Prerequisites

It would be advisable for the participants to have some experience in data center operations although it is not required.

Would you like to join the elite group of Certified Data Center Professionals?

World-Wide accredited by:

Benefits realized

After completion of the course the you will be able to Understand:

- How to setup a data center facilities operations team
- How to manage and motivate your Facilities Management team
- How to setup SLA's and manage them including liabilities, KPI's etc.
- How to manage vendors and measure their performance
- How to manage physical security taking into account requirements of standards such as ANSI/TIA-942 etc.
- How to manage safety & statutory requirements
- How to effectively and efficiently manage data center operations
- How to manage documents
- How to go about equipment life cycle including testing
- How to define data center design limits and setup and manage a proper capacity management plan
- How to commission and de-commission equipment
- How to go about IT cable management
- Managing day-to-day data center operations
- And much, much more...

epi®
Protecting your interests

Mission Critical Site Facilities Training

Course Syllabus

Day 1

The Data Center Operations Team
- Criteria and attributes of leadership
- 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 internally 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, Complaint Procedures
- Key considerations of a Vendor Agreement for Services
- Performance Measurement and Reporting

Maintenance Contracts
- Maintenance Options
- Main considerations for Maintenance Agreements
- The practicality in deciding between Comprehensive/Non-Comprehensive Maintenance Regime
- Warranty pit falls
- Service Report alignment with maintenance agreements

Managing Safety & Statutory Requirements
- Statutory and Industry Compliance/Regulations
- Emergency Response and Safety Policies and Procedures
- General Rules and Regulations for the Data Center
- Ergonomic Workspace

Service Level Agreement (SLA) Management
- Defining the Data Center Design Limitations
- Defining Measurement Criteria and Reporting
- Alignment of Business SLA with Vendor SLA
- Reporting and Escalation Management

Day 2

Managing Physical Security
- Guidelines out of the standards; ANSI/TIA-942, ISO/IEC-27001/02, SS507, ISO/IEC-24762 etc.
- SOP (Standard Operating Procedures) in managing day to day Security Access Control, such as;
  - Entry/Exit Control and Access Management
  - Permit-To-Work and Contractor Work in Progress
  - Delivery of Goods
  - Customers Access
  - Etc.
- Effective Patrols Routing and how to ensure 24hrs 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
- Floor Management Procedures and Duties such as Rack Space Allocations, Management of Installers etc.
- Walk Around Duties
- Pre-installation analysis for Power, Cooling, Weight, EMF, Fire Protection and other influencing factors

Capacity Planning
- 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

Commissioning and de-commissioning of Equipment
- 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

Cable Management
- Overview of ANSI/TIA-942, ANSI/TIA-606,
- Cabling Specification & Labeling based on ANSI/TIA-606
- In-Rack Power and Network Cabling
- Labeling 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
- Policies and Techniques to reduce Dust, Pests and other Pollution and Disturbances

Day 3

Best Practices for M&E Maintenance Regime
- Tiered maintenance considerations
- Preventive, Predictive and Condition based maintenance
- Requirements of a Comprehensive Maintenance Program including descriptions on what should be tested for which type of equipment such as Generator, UPS, Chiller etc.
- The importance and actions for Predictive Maintenance e.g.; thermo-scan, pumps vibration and alignment test, BMS failure and system back-up testing, generator load testing etc.
- The Do & Don't of Annual Testing for main equipment like transformer, genset, HT gear, chiller, cooling tower etc;
- Managing On-site /Off-sites Spares and how to determine what Spares to keep On-Site
- Daily Maintenance Routines such as data logging, daily checks, daily measurements, reporting and analysis etc.

Data Center Monitoring and Automation
- Data Center Monitoring Requirements
- Threshold Setting and Reporting Requirements
- Notification and Escalation Requirements
- Automated 24hrs Helpdesk Ticketing Systems
- Incident and Customers Complaint Management & Change Management using the above system
- 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

EXAM: Certified Data Center Facilities Operations Manager

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Mission Critical Site Facilities Training

Delivery Structure

This is an instructor-led course that uses a combination of presentation lectures and question and answer sessions to discuss attendees specific needs and issues experienced in their own environment. Attendees are able to tap on the trainer's extensive experience to solve practical problems in their current environment adding tremendous value.

The Trainer

This course will be delivered by a data center operations veteran with many years of experience in managing mission critical data centers.

Certification & Accreditation

Certification exams papers can be taken in paper based format at the end of the last day of the course, or online via an authorised training partner, depending on the country in which the course is delivered. The exam is a one and a half hour, 60 questions, multiple choice, closed book exam. Results of the exam will be communicated to the attendee within four weeks following the examination. Attendees who successfully pass the exam will receive the official "Certified Data Centre Facilities Operations Manager" Certificate.

CDFOM ® is a world-wide recognized certificate accredited and administered by the **Examination Institute for Information Science (EXIN).**

Accredited Training Provider
EXIN Expert Certificates

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.

In the USA (United States of America), South-America and Canada, the course is accredited and administered by ICOR.

The ICOR
The International Consortium For Organizational Resilience

ICOR is a not-for-profit education and credentialing organization that provides professional development, certification, thought-leadership, and the latest in research and industry trends in the area of organizational

EPI's Data Center Certification Roadmap

EPI offers four courses (depicted below) that deal with the critical components of design, implementation, operations & optimization and retiring of a mission critical Data Centre:

- **Certified Data Centre Professional**
- **Certified Data Centre Specialist**
- **Certified Data Centre Expert**
- **Certified Data Centre Facility Operations Manager**

Authorised Reseller/Partner:

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