CERTIFIED DATA CENTRE PROFESSIONAL

Introduction

In today's digital era, enterprises depend on IT infrastructure to deliver critical services. At the heart of this infrastructure is the data centre, where availability, efficiency, and resilience are non-negotiable. However, many data centres fall short of meeting the rigorous demands of modern workloads, from AI to high-performance computing, putting businesses at risk.

Ensuring a high-availability environment demands expertise in power management, cooling strategies, fire protection, security, structured cabling, and industry best practices.

The CDCP® (Certified Data Centre Professional) course is a comprehensive 2-day program designed to equip participants with essential knowledge of the data centre infrastructure's vital components.

This course provides insights into power and cooling systems, security measures, cabling structures, safety protocols, and efficiency enhancements to empowering the data centre professionals to confidently support and enhance today's data centres while preparing for future advancements.

Audience

The primary audience for this course includes data centre specialists, facilities managers and IT professionals who work in and around data centres and are responsible for ensuring and enhancing their availability and manageability.

Prerequisites

There is no specific prerequisite for the CDCP® course. However, participants who already have at least one or two years' experience in a data centre or facilities environment may be best suited. Those with no experience just yet are most welcome to participate.

Global Accreditation & Recognition

World-wide accredited by EXIN

Course Benefits ☑

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

- ☑ Explain different types of data centres, their impact on business continuity, and the key factors affecting availability.
- ☑ Examine international and national standards, industry guidelines, and compliance requirements for data centre design and sub-components.
- ☑ Identify site selection criteria, building requirements, and supporting facility needs to establish a high-performance, resilient data centre.
- ☑ Deploy raised floors and suspended ceilings while considering cooling, grounding, load management, and airflow optimization.
- ☑ Design lighting layouts, emergency lighting systems, and positioning strategies to improve visibility, safety, and energy efficiency.
- ☑ Develop power redundancy strategies, configure UPS systems, microgrids, transformers, batteries, and optimize power distribution techniques.
- ☑ Assess EMF sources, shielding techniques, and best practices to protect critical IT equipment from interference and data corruption.
- ☑ Deploy AI-driven cooling management, containment strategies, liquid cooling, and Seasonal Thermal Energy Storage (STER) to improve efficiency and reduce costs.
- ☑ Deploy network cabling designs, redundancy strategies, and TIA-942 cabling topologies for a resilient and future-ready data centre.
- ☑ Install fire suppression systems, detection technologies, and safety signage while ensuring compliance with fire protection regulations.
- ☑ Deploy physical security measures, access controls, surveillance systems, and safety protocols to protect data centre assets from threats.
- ☑ Deploy BMS, DCIM, EMS, water leak detection, and alarm panels, ensuring continuous monitoring and proactive issue resolution.

Course Syllabus

- **The Mission Critical Site**
  - Business organization
  - Types of data centres
  - Importance of a data centre
  - Elements of data centre
  - Causes of unavailability

- **Data Centre Standards**
  - Standards and guidelines
  - Standards for sub-components
  - International vs. national standards

- **Data Centre Location, Building and Construction**
  - Criteria for selecting site location the data centre location
  - Criteria for facility
  - Supporting facilities and function

- **Raised Access Flooring and Suspended Ceiling**
  - Standards
  - Types of raised floors
  - Loading factors
  - General guidelines
  - Grounding
  - Ramp and landing platform
  - Suspended ceiling
  - Raised floor and suspended ceiling impact on cooling

- **Light**
  - Measurements of light
  - Standards
  - Connecting and positioning of light fixtures
  - Emergency light
  - Types of emergency light

- **Power Infrastructure**
  - Sustainability
  - Microgrid
  - Transformers
  - Generators
  - Automatic Transfer Switch (ATS) and Static Transfer Switch (STS)
  - Power redundancy levels and techniques
  - Power distribution / Busbar trunking
  - Single phase and three phase power
  - Grounding and bonding
  - Isolation transformer
  - PDU form factors
  - Ingress Protection (IP) grades
  - Power quality parameters
  - Power sizing
  - High Performance Computing
  - UPS systems
  - UPS parallel configurations
  - Batteries
  - Battery Energy Storage System (BESS)
  - Thermographic scanning

- **Electro Magnetic Fields (EMF)**
  - Types of EMF
  - Units of measurements
  - Standards and best practices
  - Sources of EMF
  - Shielding

- **Equipment Racks**
  - Standards
  - Dimensions
  - Types of racks
  - Security
  - Power strips / rails

- **Cooling Infrastructure**
  - Cooling principles
  - Temperature and humidity
  - Types of cooling systems
  - Raised floor cooling
  - Non-raised floor cooling
  - Supplemental cooling
  - Containment
  - Liquid cooling
  - Seasonal Thermal Energy Storage (STER)

- **Water Supply**
  - Importance of water
  - Backup water supply

- **Designing a Scalable Network Infrastructure**
  - Importance network cabling infrastructure
  - Planning considerations
  - Copper cabling
  - Fibre Cabling
  - TIA-942 cabling system topology
  - Testing and verification of cabling system
  - Redundancy
  - Site-to-site connectivity

- **Fire Protection**
  - Common causes of fire
  - Requirements for fire suppression systems
  - Standards
  - Fire detection systems
  - Water based fire suppression systems
  - Gas-based fire suppression systems
  - Classes of fire
  - Best practices
  - Handheld fire extinguishers
  - Requirements for signage and safety
  - Regulatory requirements

- **Physical Security and Safety**
  - Components for physical security
  - Components for physical safety

- **Auxiliary Systems**
  - Monitoring challenges
  - Monitoring requirements
  - Environmental Monitoring System (EMS)
  - Building Management System (BMS)
  - Data Centre Infrastructure Management (DCIM)
  - Water leak detection
  - Alarm panels
  - Notification
  - Best practices

- **EXAM: Certified Data Centre Professional**

Delivery Structure and Methods

The CDCP® course is lectured by an EPI Certified Instructor using a combination of lectures and question-and-answer sessions to discuss participants' specific needs and challenges experienced in their own data centre environments. Participants are able to tap into the extensive experience of the trainer enabling them to validate and improve their own environments thus adding tremendous business value. CDCP® course is available in the following delivery methods:

- ILT – Instructor Led Training
- VILT – Virtual ILT
- TOD – Training On Demand

Examination

The exam is a 60-minute closed book exam, with 40 multiple-choice questions. The candidate requires a minimum of 27 correct answers to pass the exam.

Certification

Candidates who successfully pass the exam will receive the official 'Certified Data Centre Professional' certificate. The certification is valid for three years after which the student needs to re-certify.

Global Accreditation & Recognition

The CDCP® course is accredited by EXIN, which is a global, independent and not-for-profit accreditation and examination institute. 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 accreditation of course material as well as independent examination and certification.

Recommended Next Course

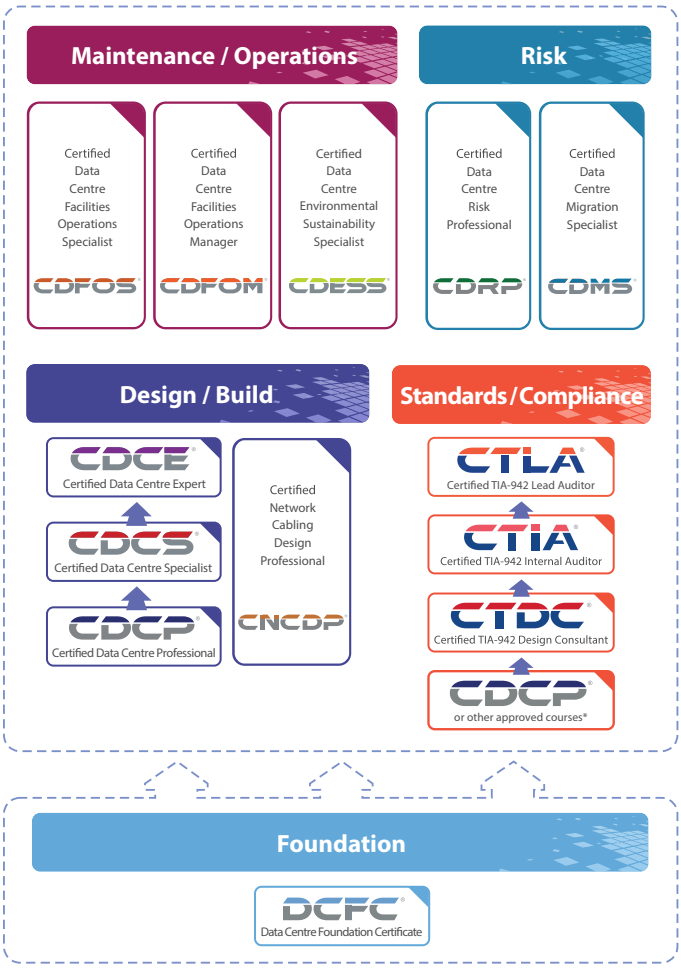
To further extend your skills, we recommend the CDFOM® and CDCS® courses. CDFOM® addresses the full data centre operations management. CDCS® addresses advance design/build knowledge.

Course Schedule

Our courses are available in over 60 countries. The classes are available on public schedule as well as private group training. Visit www.epi-ap.com or contact your local authorised reseller/partner.

EPI Data Centre Training Framework©

The **EPI Data Centre Training Framework©** provides a structured course curriculum for individuals working in and around data centre facilities and data centre operational management. It addresses the various disciplines required to design and manage a high-availability, efficient data centre. EPI's data centre course curriculum is not only the first in the world, it is also by far the largest in the industry. Many companies have specified these courses as prerequisites for their staff working in and around the data centre and use them as part of their career planning initiatives. Recognised globally, these certifications add value to both companies and individuals.



The Company

EPI is a data centre specialist company of European origin operating world-wide in over 60 countries through direct operations and a large partner network. EPI offers an extensive range of data centre services on auditing, certification and training. EPI's focus is on mission-critical, high-availability environments. Established in 1987, EPI has developed an international reputation for delivering high quality technical expertise, with flexible and innovative services, techniques and methodologies.

All our services are aimed at helping our customers to:

- Increase **Availability** of their mission-critical infrastructure
- Improve **Efficiency**, **Effectiveness** and **Manageability**
- **Minimise risk** of business interruption

Our Clients share a common need to protect their valuable data, run their mission-critical infrastructure efficiently and to be protected on a 24 x 7 basis. By protecting the interests of our customers, EPI is committed to an intensive program of comprehensive services development backed by engineering and support excellence.

Quality Systems and Procedures have always been at the heart of every stage of our service delivery to ensure consistent and high quality services. We are known for our thoroughness, flexibility and responsiveness. We focus on providing servicess that fit each organisation and each project with a drive to deliver quality on time, every time.

Let us put our expertise to work for you!

Data Centre Services

Audit & Certification

• Data Centre Standards
- ANSI/TIA-942
- DCOS®
- EN 50600
- ISO/IEC TS 22237

• Other International Standards
- ISO 9001
- ISO 14001
- ISO 14644
- ISO/IEC 20000-1
- ISO 22301
- ISO/IEC 27001
- ISO/IEC 27701
- ISO 37001
- ISO 45001
- ISO 46001
- ISO 50001
- PCI DSS

• Singapore Standards
- SS 507
- SS 564
- SS 584
- DTPM
- CBPR
- PRP

Professional Training & Certifications

- Data Centre
  DCFC®, CDCP®, CDCS®, CDCE®, CNCDP®
  CDFOS®, CDFOM®, CDESS®, CDRP®, CDMS®,
  CTDC®, CTIA®, CTLA®

- IT
  CITO®, CITM®, CITD®

Non-Certification Training

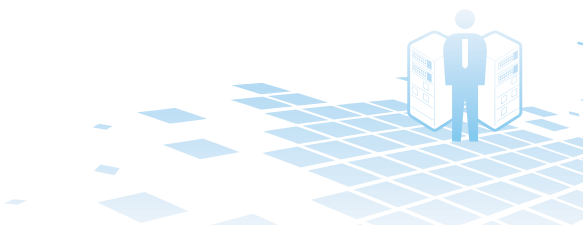
- Digital Transformation

Frameworks

- IT&DCF© - IT & Data Centre Framework
- DCCF® - Data Centre Competence Framework
- DCTF© - Data Centre Training Framework
- ITTF - IT Training Framework

Standard

- DCOS® - Data Centre Operations Standard
- MDCS - Modular Data Centre Standard
- SCMDCS - Self-Contained Modular Data Centre Standard
- CRUR® - Computer Room Utilisation Ratio



Global Headquarters:

Enterprise Products Integration Pte Ltd
Level 21 Centennial Tower, 3 Temasek Avenue, Singapore 039190.

Tel: + (65) 6829-7027 E-mail: sales@epi-ap.com Website: www.epi-ap.com
Local offices in : China, India, Italy, Japan, LATAM, Malaysia, Middle East, Pakistan, Singapore, The Netherlands, USA

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