



## HP 教育訓練中心課程簡介

Certified Data Center Professional (CDCP®) Training (HK2585)

This 2-day course is designed to expose participants to the key components of the data center. CDCP training will address how to setup and improve key aspects such as power, cooling, security, cabling, safety to ensure a hi-available data center. CDCP training will also address key operations and maintenance aspects.

### 適合對象

- The primary audience for this course is any IT, facilities or Data Center Operations professional working in and around the data center and having the responsibility to achieve and improve hi-availability and manageability of the Data Center, such as: Data center managers, Operations / Floor / Facility managers, data center engineers, network / system engineers, data center sales / consultants.

### 先修課程

- While there are no specific prerequisites for the CDCP® course, participants who have at least one/two year(s) of actual working experience in a Data Center/facilities environment are best suited.

### Delivery structure

- The courses are lectured by certified trainers. CDCP® 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.

### 課程目標

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

- Choose an optimum site for mission critical Data Center's based on current and future needs.
- Describe all components important for hi-availability in a Data Center and how to effectively setup the Data Center.
- Name and apply the various industry standards.
- Describe the various technologies for UPS, fire suppression, cooling, monitoring systems, cabling standards, etc. and to choose and apply them effectively to enhance the hi-availability of the Data Center at minimum cost.

<b>Course title:</b>	Certified Data Center Professional (CDCP®) Training
<b>HP product number:</b>	HK2585
<b>Category/Subcategory:</b>	Data Center / Design & Build
<b>Course length:</b>	2 days
<b>Level:</b>	Foundation
<b>To order:</b>	To review course schedules and to register for a course, visit <a href="http://www.hp.com.tw/education">http://www.hp.com.tw/education</a>

- Review the electrical distribution system to avoid costly downtime.
- Enhance cooling capabilities and efficiency in the Data Center by using techniques and technologies including new methodologies for high-power cooling requirements of the future.
- Design a highly reliable and scalable network architecture and learn how to ensure installers apply proper testing techniques.
- Create effective maintenance contracts with equipment suppliers ensuring the best return on investment.
- Setup effective Data Center monitoring ensuring the right people get the right message.
- Ensure proper security measures, both process and technical are in place safeguarding your companies precious information in the data center.

## Examination accredited by EXIN

- The exam is an hour, 40 questions, multiple choice and closed book exam. The candidate requires a minimum of 27 correct answers to pass the exam. Attendees passing the exam will be awarded the internationally accredited and recognized 'Certified Data Center Professional' certificate (CDCP). The certification is valid for three years after which the student needs to re-certify.

## 課程效益

- Understand more about the design and build of data centers.
- Receive training and advice from one of the industry's leading experts.
- Obtain the CDCP® certificate.

## 為何選擇HP教育訓練中心?

- Global reach through 90 training centers in 45+ languages, with access to over 800+ experienced instructors.
- Job-focused courses on HP technologies leading to HP ExpertOne certifications.
- Wide range of education consulting services tailored to your specific needs to prepare you for IT transformation projects.
- Flexibility to learn through a wide variety of delivery modalities: traditional ILT (Instructor-led), VILT (Virtual instructor-led), SPEL (Self paced e-learning), games and simulations.

## 進階課程

- In CDCS® Certified Data Centre Specialist (HK259S) more details will be revealed allowing you to review designs of existing and/or future Data Centers. CDCS® is a 'must have' course for those who are expected to manage or be involved in a Data Center build or renovation project.
- CDFOM® Certified Data Center Facilities Operations Manager (HK763S) builds upon knowledge gained in CDCP® which addresses the operational aspects of running a Data Center.

## 課程大綱

### The data center, its importance, and causes of downtime

#### Data center standards and best practices

#### Data center location, building and construction

- Selecting appropriate sites and buildings and how to avoid pitfalls
- Various components of an effective data center and support facilities set up

#### Raised floor/suspended ceiling

- Uniform, concentrated and rolling load definitions
- Applicable standards
- Raised floor guidelines
- Signal Reference Grid, grounding of racks
- Disability act and regulations

- Suspended ceiling usage and requirements

#### Light

- Standards
- Light fixture types and placement
- Emergency lighting, Emergency Power Supply (EPS)

#### Power infrastructure

- Power infrastructure layout from generation to rack level
- ATS and STS systems
- Redundancy levels and techniques
- Three phase and single phase usage
- Power distribution options within the computer room
- Power cabling versus bus bar trunking
- Bonding versus grounding
- Common mode noise and isolation transformers
- Distribution boards, form factors and IP-protection grades
- Power quality guidelines
- Real power versus apparent power
- How to size and calculate load in the data center
- Generators
- Static and dynamic UPS systems, selection criteria, how they operate and energy efficiency option
- Battery types, correct selection and testing
- Thermo-graphics

#### Electromagnetic fields

- Electrical fields and magnetic fields definitions and units of measurements
- Sources of EMF
- Effects of EMF on human health and equipment
- (H)EMP
- Standards
- EMF shielding solutions

#### Equipment Racks

- Rack standards, properties and selection criteria
- Security considerations
- Power rail/strip options

#### Cooling infrastructure

- Temperature and humidity recommendations
- Cooling measurement units and conversion rates
- Sensible and latent heat definitions
- Differences between comfort and precision cooling
- Overview of different air conditioner technologies
- Raised floor versus non-raised floor cooling
- Placement of air conditioner units and limitations to be observed
- Supplemental cooling options

- Cold aisle / hot aisle containment

#### **Water supply**

- Importance of water supply and application areas
- Backup water supply techniques

#### **Designing a scalable network infrastructure**

- The importance of a Structured Cabling System
- Planning considerations
- Copper and Fiber cable technology and standards
- ANSI/TIA-942 Cabling hierarchy and recommendations
- Testing and verification
- SAN storage cabling
- Network redundancy
- Building-to-building connectivity
- Network monitoring system requirements

#### **Fire suppression**

- Standards for fire suppression
- Detection systems
- Various total flooding fire suppression techniques and systems, their benefits and disadvantages
- Handheld extinguishers
- Signage and safety
- Regulatory requirements and best practices

#### **Data center monitoring**

- Data Center monitoring requirements
- EMS versus BMS
- Water leak detection systems
- Notification options and considerations

#### **Operational security and safety practices**

- Data center security layers
- Physical, infrastructure and organizational security
- Safety measures and essential signage

#### **Labelling**

- Choosing a labelling scheme
- Recommended labelling practices
- Network labelling

#### **Documentation**

- How to set up proper documentation
- Document management policies and procedures

#### **Cleaning**

- Cleaning practices for the data center

#### **MTBF/MTTR**

- Standards and definitions
- Calculation models
- The “real” value

#### **Maintenance contracts, SLAs and OLAs**

#### **Mock exam**

#### **EXAM: Certified Data Center Professional**

#### **更多訊息**

歡迎上網查詢HP教育訓練中心  
所有課程相關訊息及活動請造訪：  
<http://www.hp.com.tw/education>

