



HP Education Services Course Description

Certified Data Center Professional (CDCP®) Training (HK258S)

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.

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 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.

Prerequisites

- 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.

Course objectives

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.

Course title:	Certified Data Center Professional (CDCP®) Training
HP product number:	HK258S
Category/Subcategory:	Data Center / Design & Build
Course length:	2 days
Level:	Foundation
Delivery language:	English
To order:	You can register your interest for this course online at http://www.hp.com.au/education .At the site, select the course under EPI portfolio and you will see dates for the course. Register your interest for the date of your choice.

- 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.

Benefits to you

- 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.

Why education services from HP?

- Recognized as an IDC MarketScape leader for IT education ("Worldwide IT education and training 2013 vendor analysis" Cushing Anderson, IDC MarketScape, #239139, January 2013).
- Global training with more than 90 training locations worldwide.
- Unmatched technical expertise and support for HP products and technologies.
- HP MyRoom for real-time collaboration and Virtual Labs for a real hands-on experience.
- The training you need, when and where you need it with our Virtual Instructor-Led Training (VILT).
- Comprehensive curriculum of job-specific training leading to certification.
- Streamlined purchase and management of training with HP Care Pack Services for Education.
- Our HP Education Consulting team has delivered best-in-class tailored training solutions to clients for more than 30 years.
- One of the top 20 training and content development providers (TrainingIndustry.com - 2013).

Next steps

- 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.

Detailed course outline

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

- Applicable standards
- Uniform, concentrated and rolling load definitions
- Signal reference grid; grounding of racks
- Disability regulations
- Suspended ceiling usage and requirements

Light

- Standards
- Light fixture types and placement
- Emergency light; 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; isolation transformers and common mode noise
- 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 and criteria to use the correct one for the correct application
- Battery types and making the right selection and testing
- Thermo-graphics

Electromagnetic fields

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

Equipment Racks

- Rack properties
- Security considerations
- Power rail/strip options

Cooling infrastructure

- Temperature and humidity settings
- Cooling measurement units and conversion rates
- Sensible and latent heat definitions
- Difference between comfort and precision cooling
- Overview of different air conditioner technologies
- Raised floor versus non-raised floor cooling
- 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
- 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 fire suppression techniques and systems, their benefits and disadvantages
- Signage and safety
- Regulatory requirements and best practices
- How to ensure that your fire suppression is working

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

For more information

To locate contact information and to learn more about education services, please visit our web site at <http://www.hp.com.au/education> .

