



Hewlett Packard Enterprise

Course Datasheet

Certified Data Center Expert (CDCE®)

Education Services course product number – HK260S

Course length – 5 days

Delivery mode – Instructor Led Training (ILT)

Virtual Instructor Led Training (VILT)

Register – [Click here to go to HPE Learning Portal](#)

This five-day course is designed to prepare participants to analyze a given business case and perform technical evaluation for a project plan and a set of designs for implementation of a mission critical Data Center. The course also engages participants in product evaluations and demonstrates how to select equipment and develop equipment test scripts (IET) and integrated performance and validation testing (IPVT). CDCE builds upon knowledge gained in CDCP® and CDCS® courses.

Audience

The primary audience for this course is any IT, facilities or data center professional, who are involved in the design/build, renovation or relocation of a mission critical data center.

Prerequisites

Participants must hold a valid CDCS certificate (HK259S) in order to register for the CDCE class.

Course Objectives

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

- Choose an optimum site for mission critical Data Centers 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.
- Understand the design lifecycle stages for Data Center build projects and the phases involved in project execution.
- Analyze a business case and develop a project brief that is aimed at fulfilling the business resilience, site selection and design requirements for a fit-for purpose and suitably redundant mission critical Data Center.
- Conduct technical level design reviews for a given set of preliminary design documents and perform a technical compliance audit of a set of final design development documents compliant to TIA standards.

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- Understand how to read electrical Single Line Diagrams (SLD) and other related design documents, and be able to detect the most common design mistakes.
- Evaluate product datasheets and discriminate among technical specifications and functional requirements for suitability against a set of given design requirements for a given site and business case.
- Correlate equipment specifications to site design constraints, such as room size and space, floor-loading capacity, cooling capacity, power quality conditions and maintenance requirements while ensuring equipment selection does not compromise desired tier level compliance.
- Develop Individual Equipment Test (IET) and Integrated Performance and Validation Test (IPVT) plans for a mission critical Data Center.
- Develop guidelines and checklists for hand-over of a mission critical Data Center facility, its architectural, mechanical, electrical, IT elements and documentation.
- Develop retirement plans for decommissioning and hand-over of an aged mission critical Data Center facility.

Detailed Course Outline

- Data Center Life Cycle
 - Data Center lifecycle stages and phases
 - Exercise: Stage/Phase/Milestone/Document mapping
- Design Preparation
 - Creation of a SON – Statement Of Need
 - Technology review
 - Conceptual sizing
 - How to calculate for computer room space
 - How to calculate facility space
 - How to calculate incoming power
 - Exercise: Conceptual sizing building and power
 - Analyzing capacity of existing facility
 - Analyzing investment options
 - Site selection
 - Permits and approvals
 - Exercise: Site selection
 - Conceptual design
 - Budget and project timeline
 - Business case preparation
 - Project delivery structure
 - Project management options
 - Project manager and team
- Design Planning
 - OSRA – Operational Systems Requirement Analysis
 - TFRA – Technical Facilities Requirement Analysis
 - Operational and maintenance review
 - RFP – Request For Proposal process
 - Vendor Selection
- Design Development
 - Project Planning
 - Design Development
 - PDR – Preliminary Design Review
 - Equipment selection
 - FDR/V – Final Design Review/Validation
 - Exercise: Full design validation of power, cooling, floor plans, fire suppression
 - Design Freeze and LLIP
 - Creation of construction documents
 - BOM/BOQ – Bill Of Material / Bill Of Quantity
 - Exercise: Equipment selection

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- Acquire
 - Requirements of Purchase Orders
 - Shipping Terms
 - FWT/FAT – Factory Witness Test / Factory Acceptance Test
 - Sequencing
 - Incoming Goods Inspection and Handling
 - Asset management
- Construct
 - Temporary Essential Services
 - Erection of the building
 - Permanent Essential Services
 - Building Inspection
 - Snag List
 - COF – Certificate Of Fitness
- Fit-Out
 - Fit-Out
 - Builders Cleaning
 - As-Built Drawings
- Test & Commissioning
 - IET – Individual Equipment Test
 - IPVT/IST – Integrated Performance Verification Test / Integrated Systems Test
 - Common mistakes with IET/IPVT
 - Deep Cleaning
 - Exercise: IET/IPVT scripting
- Hand-Over
 - Facility Hand-Over requirements and documents
 - PCC – Practical Completion Certificate
 - DLP – Defect Liability Period
 - Defect Management
 - ICT Systems Installation
 - ICT Systems Testing
 - Hand-Over/DLP Expiry
 - FCC – Final Completion Certificate
- Retirement
 - Reasons and definitions of retirement
 - Building the business case and project plan
 - Sequencing
 - Transfer of Site
 - Demolishing of Site
 - Legal matters
 - FCC – Final Completion Certificate
- EXAM: Certified Data Center Expert

Examination accredited by EXIN

Part A is a 90-minute, 60 questions multiple choice and closed book exam and the candidate requires a minimum of 45 correct answers to pass the exam. Part B is a 90-minute, 25 open questions and closed book exam and the candidate needs to obtain a minimum of 75% to pass. Attendees passing the exam will be awarded the internationally accredited and recognized Certified Data Center Expert certificate (CDCE). The certification is valid for three years after which the student needs to re-certify.

Recommended next courses

CDFOM® Certified Data Center Facilities Operations Manager (HK763S) course builds upon knowledge gained in CDCP/S/E® which addresses the operational aspects of running a Data Center. CDFOM® is an essential course for those who are expected to manage the daily operations of a mission critical Data Center.