



CERTIFIED DATA CENTRE EXPERT

Introduction

With few exceptions, enterprises today rely on IT for the delivery of business-critical services - often directly to the end consumer. It is therefore vital that the mission-critical data centre is designed, maintained and operated with high-availability and efficiency in mind. However, the fact is most data centres do not meet the full availability, capacity, safety or efficiency requirements that are often demanded. The ever-changing technologies put even more pressure on data centre managers along with the faster pace at which these changes are required.

The Certified Data Centre Expert course is a five-day course designed to prepare participants to analyse a given business case, perform technical evaluation of a project plan and a set of designs for the implementation of a mission-critical data centre. The course also engages participants in product evaluations and demonstrates how to select equipment, develop equipment test scripts (IET) and integrated performance and validation testing (IPVT). CDCE[®] builds upon knowledge gained in CDCP[®] and CDCS[®] courses. Participants who pass the exam will join the industry's elite data centre project design experts.

Roadmap



Audience

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

Prerequisites

Participants must hold a valid CDCS[®] certificate in order to register for the CDCE[®] class.

Global Accreditation & Recognition



Course Benefits

- After completion of the course the participant will be able to:
- Choose an optimum site for mission-critical data centres based on current and future needs.
 - Describe all components important for high-availability in a data centre and how to effectively setup the data centre.
 - Understand the design lifecycle stages for data centre build projects and the phases involved in project execution.
 - Analyse 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 centre.
 - 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.
 - 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 amongst 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 Validation Test (IPVT) plans for a mission-critical data centre.
 - Develop guidelines and checklists for handover of a mission-critical data centre facility, its architectural, mechanical, electrical, IT elements and documentation.
 - Develop retirement plans for decommissioning and handover of an aged mission-critical data centre facility.

- **Module 1**
Data Centre Life Cycle
 - Data centre lifecycle stages and phases
 - Exercise: Stage/Phase/Milestone/Document mapping
- **Module 2**
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

 - Analysing capacity of existing facility
 - Analysing 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
- **Module 3**
Design Planning
 - OSRA – Operational Systems Requirement Analysis
 - TFRA – Technical Facilities Requirement Analysis
 - Operations and maintenance review
 - RFP – Request For Proposal process
 - Vendor selection
- **Module 4**
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 LLTI
 - Creation of construction documents
 - BOM/BOQ – Bill Of Material/Bill Of Quantity
 - Exercise: Equipment selection
- **Module 5**
Acquire
 - Requirements of purchase orders
 - Shipping terms
 - FWT/FAT – Factory Witness Test/Factory Acceptance Test
 - Sequencing
 - Incoming goods inspection and handling
 - Asset management
- **Module 6**
Construct
 - Temporary essential services
 - Erection of the building
 - Permanent essential services
 - Building inspection
 - Snag list
 - COF – Certificate Of Fitness
- **Module 7**
Fit-Out
 - Fit-Out
 - Builders cleaning
 - As-Built Drawings
- **Module 8**
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
- **Module 9**
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
- **Module 10**
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 Centre Expert**



Delivery structure

EPI courses are lectured by certified trainers. CDCE® 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. The CDCE® course is approximately 60% hands-on and 40% lecture. 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.

Examination

Certification exams are administered at the end of the last training day by an authorised training partner, either using paper-based or online format, depending on the country in which the course is delivered. The exam is in two parts: Part A is a 90-minute closed book exam, with 60 multiple-choice questions. For Part A, the candidate requires a minimum of 45 correct answers to pass the exam. Part B is a 90-minute closed book exam, with 25 open questions. For Part B the candidate needs to obtain a minimum of 75% to pass. Online exam results are known immediately and paper-based exam results will be known within one week.

Certification

Candidates who successfully pass the exam will receive the official 'Certified Data Centre Expert' certificate. The certification is valid for three years after which the student needs to re-certify. More information is available on the EPI corporate website at www.epi-ap.com.

Global Accreditation & Recognition

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.

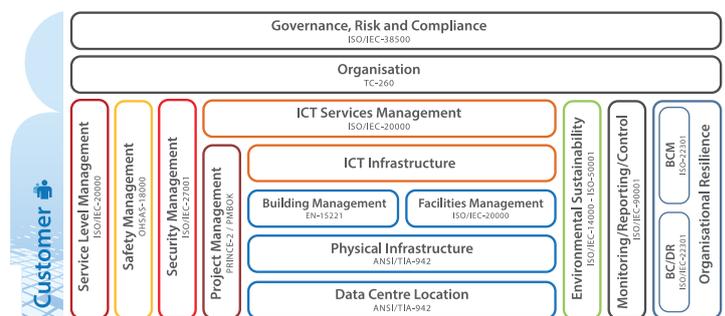
Recommended next course

To further extend your skills in the data centre design arena, we recommend the CDFOM® course. CDFOM® builds upon knowledge gained in CDCP/CDCS/CDCE®. It addresses the operational aspects of running a data centre. CDFOM® is an essential course for those who are expected to manage the daily operations of a mission critical data centre. For full course outlines of this and other courses, visit the EPI corporate website www.epi-ap.com.

Course schedule

Our courses are available in over 50 countries across all continents. For a comprehensive course schedule, visit the EPI corporate website at www.epi-ap.com or contact your local authorised reseller/partner.

EPI Data Centre Framework®



© Copyright by EPI (Enterprise Products Integration Pte Ltd) 2015. All rights reserved.

The EPI Data Centre Framework® provides data centre investors/owners/operators with a data centre ecosystem addressing all disciplines of a structured and fully managed data centre. The EPI Data Centre Framework® addresses not only the site selection, design and outfitting of its physical facilities but it also includes the governance and all processes required to organise and operate a data centre which meets the business requirements of its customers. For more information visit www.epi-ap.com.



Global Headquarters:

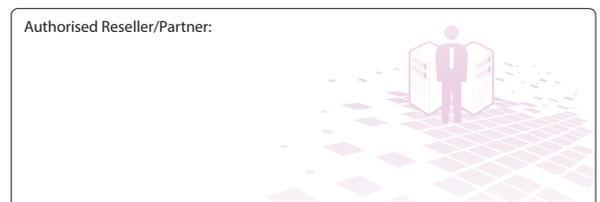
Enterprise Products Integration Pte Ltd

37th Floor, Singapore Land Tower, 50 Raffles Place, Singapore 048623.

Tel: + (65) 6733-5900 Fax: + (65) 6735-6400 E-mail: sales@epi-ap.com Website: www.epi-ap.com
Local offices in : India, Japan, Malaysia, Middle East, Pakistan, Singapore, South Africa, The Netherlands, USA

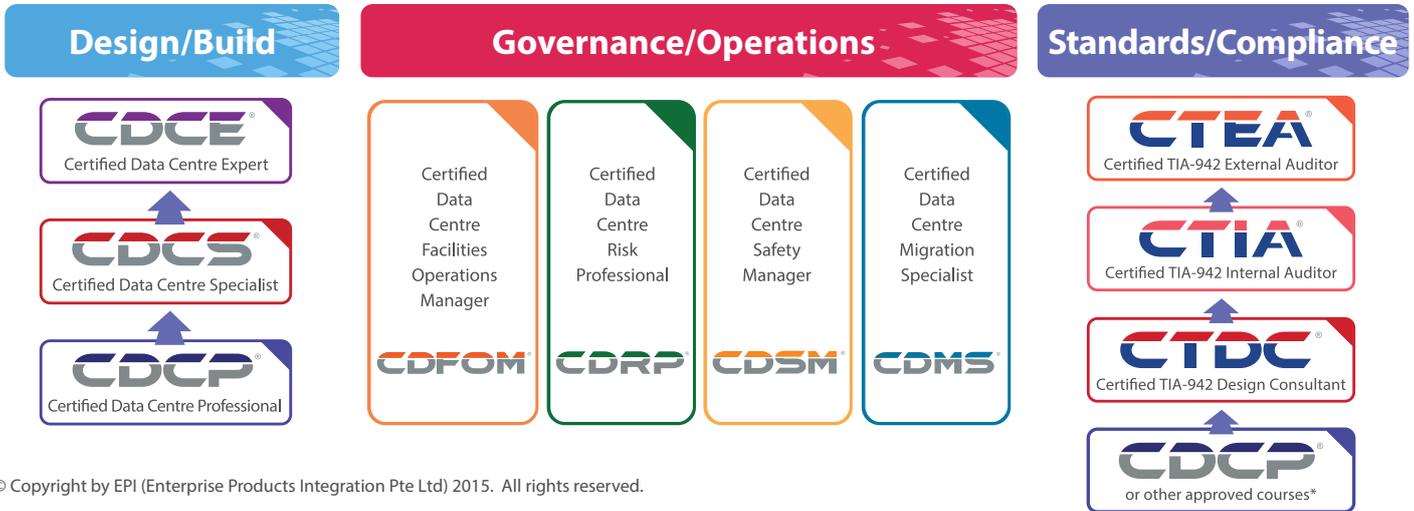
R15-01

Authorised Reseller/Partner:





EPI Data Centre Training Framework®



© Copyright by EPI (Enterprise Products Integration Pte Ltd) 2015. All rights reserved.

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 company of European origin operating world-wide in over 50 countries through direct operations and a large partner network. EPI offers an extensive range of data centre services on consultancy, 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 solutions, 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 in our project management. We focus on providing solutions 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

Consultation

- Data Centre Design Validation
- Data Centre Design Evaluation
- Data Centre Review/
Independent Second Opinion

Audit and Certification

- ANSI/TIA-942
- SS507
- ISO/IEC-27001
- ISO/IEC-20000

Survey and Assessment

- Power Quality
- Cooling
- EMF
- Thermo Scanning
- Physical Security
- Customised Surveys

