



**Certified Data Centre  
Technician Professional**

Pearson BTEC Level 4  
Professional Award

5 Day Program

# CNet Training

An Uptime Education Company

Global Leading Technical Education  
for the **Digital Infrastructure Industry**

## Program Duration

5 days.

## Program Format

70% Theory, 30% Practical.

## Program Objectives

CDCTP® certified individuals possess the knowledge, expertise and skills that are considered essential in ensuring that a data centre facility is operated and maintained to the highest possible standards.

## Learner Profile

This program has been specifically designed for individuals wishing to acquire skills of the highest calibre in order to carry out their technical data centre duties. CDCTP® certification is beneficial to personnel who contribute to the day-to-day smooth operation of the mission critical facility.

## Pre-requisites

Experience of working within a data centre environment is essential. If you would like to discuss your experience or suitability for this program please contact us.

## Program Requirements

Learners are required to have:

- ▶ A webcam and microphone enabled laptop with unrestricted wireless internet connectivity and a pre-installed web browser
- ▶ A suitable application for reading/annotating PDFs and a suitable application for editing standard office documents such as Microsoft Word, PowerPoint, and Excel

## Qualification

- ▶ Internationally and industry recognised Pearson BTEC Level 4 Professional Award in Certified Data Centre Technician Professional

## Certification

- ▶ Official Certified Data Centre Technician Professional (CDCTP®) certification
- ▶ Use of the CDCTP post nominal title
- ▶ Use of the official CDCTP® Digital Badge
- ▶ Use of the CDCTP® logo

Certifications are a commitment to lifelong learning and offer the perfect portal to ensure knowledge, skills and certification remain current and up-to-date. Each certification gained requires re-certifying every three years via an online learning management system.

## Additional Awards

- ▶ Continuing Professional Development (CPDs)
- ▶ 5 IEEE Continual Education Units (CEUs)

## Certified Data Centre Technician Professional (CDCTP®)

Excel in a highly skilled and efficient technical team charged with optimising the operational capability and productivity of the data centre to meet the evolving demands of the business.

### Program Overview

Ensuring zero downtime within the mission critical data centre environment involves employing highly competent and confident technicians who consistently demonstrate unrivalled technical knowledge and skills. High quality technicians are increasingly seen as a vital component to the smooth running of any data centre operation.

The five-day Certified Data Centre Technician Professional (CDCTP®) program is for individuals working within mission critical data centre facilities. It explores the wide range of subjects relevant to the data centre technician including a detailed breakdown of the data centre operating environments and the four key constraints to its operational effectiveness (power, cooling, IT and space), the necessary operational policies, procedures and compliance based on legislation, standards (national and international) and codes of conduct. During the program, learners will be provided a valuable opportunity to access the latest industry standards.

Certified technicians can foresee potential causes of failure honing an in-depth understanding of facility components and their operating parameters. In addition, technicians can identify, analyse, and remedy problems as they occur, quickly, decisively and accurately, avoiding potential high cost repairs and the risks associated with loss of service.

The CDCTP® program is led by one of CNet's expert Instructors and is available via remote attendance or classroom-based.

***“In a short amount of time, this program covers a wide variety of technical information covering all aspects of a data centre.”***

## CDCTP® Learner Comment

# Certified Data Centre Technician Professional (CDCTP®) Topics

### Data Centre Fundamentals

- ▶ What is a data centre?
- ▶ Understanding the basic design requirements
- ▶ Availability and resilience measures and practices

### Compliance

- ▶ Codes and regulations
- ▶ National and international standards
- ▶ Industry guidelines and best practices
- ▶ Certification and accreditations

### The Physical Infrastructure

The four key environments (power, cooling, IT and space)

### Power

- ▶ Power infrastructure (data centre electrical distribution)

### Cooling

- ▶ Cooling infrastructure and airflow management
- ▶ Overview of different cooling system technologies

### IT Connectivity

- ▶ Active network
  - ▶ Equipment configuration
  - ▶ Servers, software and services
  - ▶ Storage infrastructure
  - ▶ Data centre networks
  - ▶ Distribution options
- ▶ Physical network
  - ▶ IT cabinets and frames
  - ▶ Cable containment
  - ▶ Data centre topologies
  - ▶ Structured wiring
  - ▶ Fibre optical cabling

### Space

- ▶ Relationship between white and grey space environments
- ▶ Physical security and access control

### Working in the Data Centre

#### Safety Consideration

- ▶ Risk assessment and method statements
- ▶ Environmental health and safety
- ▶ Personal protective equipment
- ▶ Life safety systems (fire detection and suppression)

#### Task Preparation

- ▶ Understanding the operation structure
- ▶ Operational processes and procedures
- ▶ Moves, Adds and Changes (MACs)
- ▶ Decommissioning
- ▶ Operational measuring and monitoring

#### Asset Management

- ▶ Management tools, administration
- ▶ Change management

### Data Centre Maintenance

- ▶ The need for maintenance
- ▶ Maintenance strategies
  - ▶ Preventative maintenance
  - ▶ Predictive maintenance
  - ▶ Reliability centred maintenance
  - ▶ Condition-based maintenance
- ▶ Power maintenance
- ▶ Cooling maintenance
- ▶ IT connectivity maintenance

### Data Centre Power Infrastructure

- ▶ Electrical safety
- ▶ Power infrastructure systems (distribution path and components)
- ▶ Back-up power infrastructures
- ▶ Earthing and bonding
- ▶ Measuring, monitoring and routine checks
- ▶ Benchmarking and data centre metrics

### Data Centre Cooling Infrastructure

- ▶ Understanding the need for cooling
- ▶ Data centre cooling architectures and systems
- ▶ Air cooling
- ▶ Economiser modes
- ▶ Liquid cooling
- ▶ Chilled water plant
- ▶ Cooling towers
- ▶ Measuring, monitoring and routine checks
- ▶ HVAC efficiency and Power Usage Effectiveness (PUE) relationship

There are a number of group and individual case studies throughout this program.

## CDCTP® Benefits for Individuals

- ▶ Understands all aspects of data centre operations including technical and physical constraints. Recognises the dependencies on other workstreams, can plan work efficiently and avoid unnecessary delays
- ▶ Understands the benefits of carrying out physical inspections of data centre components as a matter of routine. Adopts a proactive attitude and can identify potential equipment failures before they occur
- ▶ Understands the need to adhere to codes, legislation and standards and is focused on first-time compliance, avoiding unnecessary rework
- ▶ Recognises the roles of others within the facility and can improve business processes through effective contribution to the right people and at the right level

## CDCTP® Benefits for Businesses

- ▶ Have a technical team equipped with a broad knowledge of data centre functions and operational processes enabling the business to function with optimum efficiency
- ▶ Significantly reduces the risk of failure by having knowledgeable and proactive technical staff capable of identifying signs of potential failure
- ▶ Having a technical team with a broad knowledge of codes, legislation and standards instils confidence that the data centre can operate effectively whilst consistently meeting legal and contractual obligations
- ▶ Develop a technical team that is cognisant of the roles of their peers and managers ensuring efficient and timely passage of accurate information and thereby increasing productivity