



Certified Data Centre
Audit Professional

BTEC Level 5
Professional Certificate

The **Global Leader** in **Technical Education**
for the **Digital Infrastructure Industry**

Certified Data Centre Audit Professional (CDCAP®)

Program Objectives

Those with the CDCAP® certification can demonstrate advanced knowledge and ability to plan and perform a data centre audit in line with the very latest industry requirements and standards.

Learner Profile

This program is for data centre professionals with the technical experience within the varying data centre environments wishing to extend their knowledge, skills and certifications in this highly specialised area.

Pre-Requisites

This program requires learners to have a sound technical experience within the applicable environments of a mission critical data centre facility.

Program Duration

5 day class requiring pre-class reading of approximately 20 hours.

Program Requirements

Learners are required to undertake pre-class reading and bring a laptop with internet connectivity to the class.

Qualification

- ▶ Internationally and industry recognised BTEC Level 5 Professional Certificate Certified Data Centre Audit Professional

Certification

- ▶ Official Certified Data Centre Audit Professional (CDCAP®) certification
- ▶ Use of CDCAP post nominal title
- ▶ Use of the CDCAP® logo

Certifications are a commitment to life-long 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

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



Certificate no: 0959T2

Certified Data Centre Audit Professional (CDCAP®)

Program Overview

Learn how to plan and implement a data centre audit. Includes the audit process and analysis of the audit data to verify the status of the data centre and make detailed and structured recommendations to establish an action plan to ultimately improve the operational capability to support the business needs.

The demand for a data centre to run at its optimum capability in both an effective and efficient manner is an essential requirement for a business. This five day program has been designed to provide data centre professionals with the skills, knowledge, qualification and certification to plan, implement and action a comprehensive audit of data centre environments.

Learners will gain an in-depth understanding regarding acquiring detailed and accurate information concerning the operational capability of the data centre facility. The program considers the potential areas of risk and recommendations regarding how to improve the availability, resilience and efficiency of a data centre including the physical infrastructure (IT, power and cooling), building's facility structure, asset management, documentation, processes and procedures. Whilst appreciating the need to measure, monitor and collate data to evaluate and analyse the operational effectiveness of a data centre.

Undertaking the CDCAP® program provides learners with current industry expertise and best practices to allow them to strategically plan and implement systems and procedures to undertake and manage the audit process.

This program is a must and recommended for all data centre management (operations, facilities, IT & network) structures and the key supporting engineering and operational teams.

The CDCAP® also takes into account the requirements of the current BS EN 50600 and TIA 942-B standards, industry best practice documentation and codes of conduct. During the program learners will also have access to current standards for reference purposes.

CDCAP® Benefits for Individuals

- ▶ Can liaise with the data centre manager or external customer to establish a scope for an effective audit plan
- ▶ Auditor is aware of all the tools available to be utilised throughout the audit process
- ▶ Ability to compile a full and complex audit report incorporating all measured values
- ▶ Can conduct detailed analysis and develop recommendations for the audit report

CDCAP® Benefits for Business

- ▶ Delivers a clear plan to the data centre manager or external customer to ensure a smooth audit process
- ▶ Ensures a full and robust set of measurements are provided in accordance to the audit plan
- ▶ Able to present a detailed report in accordance with the audit plan in a timely manner
- ▶ Delivers a professional audit report to allow actions to be determined to improve operational capability

Core Unit

The Business Needs

- ▶ Appreciate why audits are an essential business requirement
- ▶ Understand the importance of defining the current business needs
- ▶ Appreciate the need to define what the business actually has
- ▶ Understand the business (C Level) against operational perceptions
- ▶ Ascertain whether the business understands their tier rating and that it actually meets the business need

Scoping the Audit

- ▶ Understand the impact of business Service Level Agreements (SLAs)
- ▶ Understand the business direction and the importance of identifying the key stakeholders
- ▶ Understand the interaction between the key stakeholders and the operational data centre departments
- ▶ Appreciate the factors to be considered when formulating the audit scope
- ▶ Appreciate applicable supporting standards, regulations and industry best practices

Establishing the Audit Process

- ▶ Appreciate the need to understand the present capability against the business perception
- ▶ Appreciate the business expectations with the need for a continuous commissioning process
- ▶ Be able to define the framework of the audit process

- ▶ Understand the need to undertake an audit risk analysis process
- ▶ Be able to identify the audit lead and team requirements

Performing the Audit

- ▶ Appreciate the need to undertake documentation review
- ▶ Appreciate the impact of Regulatory requirements and Service Level Agreements (SLAs)
- ▶ Appreciate the operational and environmental structures within the data centre structure
- ▶ Understand the key audit areas, the audit expectations and implementation of test sequences

Analysis and Recommendations

- ▶ Appreciate the need to evaluate the audit findings against the operational requirements of the business
- ▶ Identify the gaps in the operational capability
- ▶ Understand the need to evaluate policies, processes and procedures against business expectations
- ▶ Appreciate the need for operational documentation accuracy
- ▶ Appreciate the assessment of equipment against lifecycle costs, ROI and TCO
- ▶ Identification of business risks, operational weaknesses and areas of inefficiency

Action Plan and Reporting

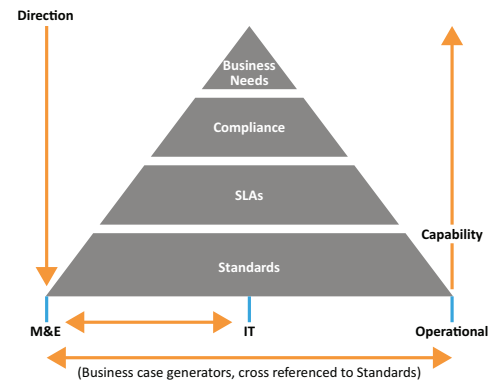
- ▶ Understand the need to determine how the site measures up against the recognised industry best practices that are considered to be appropriate by the auditor
- ▶ Understand how to assess the recommendations and formulate the supporting action plan

Measuring and Monitoring Progress

- ▶ Appreciate the importance of establishing an accurate baseline
- ▶ Appreciate the importance of establishing a structured measuring and monitoring strategy
- ▶ Appreciate the appropriate use of metrics
- ▶ Appreciate the need to re-evaluate the action plan

Follow on Actions

- ▶ Appreciate the need for forward planning
- ▶ Appreciate the actions to align the data centre assets following the audit process
- ▶ Appreciate the need to review and align skill-sets
- ▶ Appreciate industry guidance and accreditations



Professional Unit

Audit Preparation

- ▶ Understand the importance of the business and key stakeholder demands
- ▶ Understand the need for an effective audit structure
- ▶ Understand the need to have an effective communication plan
- ▶ Understand the need to identify areas of concern and potential improvements

Mechanical (Power and Cooling) Audit

- ▶ Understand the electrical systems audit process
- ▶ Understand how to conduct an audit
- ▶ Understand the importance of power quality
- ▶ Understand the data centre electrical distribution system
- ▶ Understand electrical safety requirements in a data centre
- ▶ Understand the data centre mechanical systems audit process
- ▶ Understand what systems to audit are included in a data centre mechanical systems audit
- ▶ Appreciate the value of data centre cooling metrics
- ▶ Understand the importance of the chilled water cooling circuit
- ▶ Understand the methods to conduct a cooling capacity check
- ▶ Understand the importance of air management in a data centre
- ▶ Understand the benefits of performing a Computational Fluid Dynamic (CFD)

IT Infrastructure Audit

- ▶ Understand how to plan an IT audit
- ▶ Understand the different areas of an IT audit
- ▶ Understand the audit demands of the computer, storage and network environments
- ▶ Understand the supporting infrastructures that require to be audited

Security Audit

- ▶ Understand the focus, segments and scope required to spell out security audit requirements
- ▶ Understand the training, certifications and experience of potential security auditors or know where to look for guidance
- ▶ Scope and types of security audits
- ▶ Understand potential audit outcomes
- ▶ Evaluate the security auditor's report
- ▶ Understand how to distribute and archive the security audit

Building and Support Services Audit

- ▶ Understand the need to review the Building Automation Systems (BAS) and site maintenance
- ▶ Understand the key areas of measuring and monitoring
- ▶ Understand the implementation of the fire containment plan and emergency requirements
- ▶ Understand what support services are in place

Asset Management Audit

- ▶ Appreciate the importance of asset management
- ▶ Understand the need to develop an effective asset management strategy
- ▶ Understand the asset management control options
- ▶ Understand the impacts of MACs and decommissioning
- ▶ Understand the financial implications

Process, Procedures and Working Practices Audit

- ▶ Appreciate the structure of data centre policies, processes and procedures
- ▶ Appreciate the need to review the policies, processes and procedures
- ▶ Evaluate whether they are fit for purpose and actions to escalate non-compliance issues
- ▶ Appreciate the industry guidance to improve the effectiveness of the processes and procedures
- ▶ Appreciate the implementation of appropriate review cycles

Documentation Audit

- ▶ Understand the need to incorporate documentation into the audit process
- ▶ Understand the need for structured and accurate documentation
- ▶ Understand external and internal compliance documentation
- ▶ Understand how key operational structures are documented
- ▶ Understand whether the documentation is ultimately "fit for purpose"

Audit Closure Process

- ▶ Understand the need to effectively collate the audit data
- ▶ Understand the need to implement an effective action plan incorporating all interested parties
- ▶ Understand the need to have a structured approach to ensure a continual audit capability is implemented

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

