



*Training Course:
Data Centre Professional*

*7 - 18 December 2026
Madrid (Spain)*

Training Course: Data Centre Professional

Training Course code: IT234686 From: 7 - 18 December 2026 Venue: Madrid (Spain) - Training Course Fees: 10300 € Euro

Introduction

Many enterprises rely on IT for the delivery of business-critical services. It is vital that the mission critical data centre is designed, maintained and operated with high availability and efficiency in mind. The Data Centre Professional knows the requirements for setting up and improving key aspects of the data centre such as power infrastructure, cooling, security, cabling and safety to ensure a data centre with a high level of availability. The course also covers some of the key operations and maintenance aspects of the data centre .

Objectives

- Understand the principles of designing, operating, and maintaining a high-availability and efficient data center
- Identify critical infrastructure components of a data center including power, cooling, cabling, security, and safety systems
- Learn how to plan and evaluate data center location, building design, and construction requirements
- Understand power infrastructure design including redundancy, UPS systems, generators, and power distribution
- Gain knowledge of cooling systems and environmental control strategies for optimal data center performance
- Understand structured cabling systems, network design, and redundancy planning in data centers
- Learn fire detection, suppression systems, and safety standards used in modern data centers
- Understand physical security controls and risk mitigation strategies for data center environments
- Gain awareness of monitoring systems including EMS, BMS, and DCIM tools
- Understand operational best practices including maintenance, governance, service level management, and compliance
- Develop the ability to assess and improve data center availability, reliability, and operational efficiency

Target Audience

- IT professionals working in data center environments end customers or service providers
- Facilities professionals responsible for data center operations and infrastructure
- Data Centre Operations staff focused on availability, reliability, and manageability
- Data Center Managers overseeing overall operations and performance
- Operations, Floor, and Facility Managers managing day-to-day data center activities
- Data Center Engineers responsible for technical infrastructure and support
- Network Engineers working on data center connectivity and performance
- System Engineers supporting servers, systems, and IT infrastructure in data centers
- Data Center Sales Professionals involved in solution design and client engagement
- Data Center Consultants advising on design, operations, and optimization strategies

Course Outline

Day 1: Data Center Fundamentals & Site Selection

- Introduction to Data Centers
- Importance of High Availability & Efficiency
- Selecting Data Center Locations
- Building Design Considerations
- Construction Standards and Common Pitfalls

Day 2: Raised Floor, Ceiling & Standards

- Raised Floor Systems Overview
- Load Definitions Uniform, Concentrated, Rolling
- Grounding and Signal Reference Grid
- Standards and Guidelines
- Suspended Ceilings and Requirements
- Lighting Systems and Emergency Lighting

Day 3: Power Infrastructure - Basics & Distribution

- Power Flow from Generation to Rack Level
- Power Distribution Design
- ATS and STS Systems
- Redundancy Models N, N+1, 2N
- Single-phase vs Three-phase Power
- Power Cabling vs Busbar Systems

Day 4: Power Quality & Backup Systems

- Power Quality Concepts
- Load Calculation and Sizing
- UPS Systems Static & Dynamic
- Battery Types, Selection & Testing
- Generators and Backup Power Systems
- Grounding vs Bonding

Day 5: Electrical Safety, EMF & Equipment Racks

- Electrical and Magnetic Fields EMF
- Sources and Effects of EMF
- EMF Protection and Standards
- Equipment Rack Standards and Selection
- Rack Security and Power Rail Options

Day 6: Cooling Infrastructure

- Temperature and Humidity Standards
- Cooling Technologies Overview
- Precision vs Comfort Cooling
- Raised Floor vs Non-Raised Cooling
- Hot Aisle / Cold Aisle Containment
- Supplemental Cooling Solutions

Day 7: Water, Cabling & Network Infrastructure

- Water Supply in Data Centers
- Structured Cabling Systems
- Copper vs Fiber Technologies
- ANSI/TIA-942 Standards
- Network Redundancy Design
- SAN and Inter-building Connectivity

Day 8: Fire Protection & Safety Systems

- Fire Detection Systems
- Fire Suppression Systems Gas, Water, etc.
- Handheld Extinguishers
- Safety Regulations and Signage
- Best Practices for Fire Risk Reduction

Day 9: Physical Security & Monitoring Systems

- Physical Security Design
- Access Control Systems
- EMS, BMS, and DCIM Systems
- Water Leak Detection Systems
- Alarm and Monitoring Systems
- Security Compliance Requirements

Day 10: Operations, Maintenance & Governance

- Service Level Management SLAs
- Data Center Operations & Organization
- Maintenance Strategies
- Monitoring and Reporting
- Governance and Compliance
- Continuous Improvement Practices

Registration form on the Training Course: Data Centre Professional

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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- Please find enclosed a cheque made payable to Global Horizon
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3 Oudai street, Aldouki,
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