

# Data Center Operations and Monitoring

London (UK) 11 - 15 August 2025



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# Data Center Operations and Monitoring

Code: IT28 From: 11 - 15 August 2025 City: London (UK) Fees: 5100 Pound

## Introduction

This course is designed to equip IT professionals with the practical knowledge and skills required to operate and monitor modern data centers. It covers infrastructure components, environmental control, monitoring tools, standard operating procedures, incident management, and security essentials. The course emphasizes reliability, efficiency, and operational excellence.

# **Course Objectives**

By the end of this course, participants will be able to:

- Understand the key systems and infrastructure supporting data centers.
- Apply operational best practices and standard procedures.
- Use monitoring tools to track performance, availability, and environmental conditions.
- Respond effectively to incidents and unplanned outages.
- Implement physical and cybersecurity measures within the data center.

# **Course Outline**

#### Day 1 - Data Center Infrastructure and Standards

- · Introduction to types of data centers enterprise, colocation, hyperscale
- Core components: power systems, cooling, cabling, racks
- Data center classifications Tier I-IV
- International standards TIA-942, ISO 27001, ANSI/BICSI
- · Overview of physical layout and airflow management

#### Day 2 - Operational Procedures and Maintenance

- Roles and responsibilities in data center operations
  - Standard Operating Procedures SOPs and documentation
  - Preventive vs. corrective maintenance
  - Inventory and capacity management
  - Vendor and contractor coordination

#### Day 3 - Monitoring Systems and Environmental Control

- Monitoring platforms: DCIM, SNMP, BMS
- · Real-time environmental monitoring temperature, humidity, airflow
- Power usage effectiveness PUE and energy monitoring
- Alarm thresholds and notification protocols
- Dashboard design and KPI tracking

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## Day 4 - Incident Management and Troubleshooting

- Lifecycle of incident management
- · Fault detection and root cause analysis
- Escalation and communication protocols
- Planned vs. unplanned outages
- Change management and rollback procedures

## Day 5 - Data Center Security and Optimization

- Physical security: access control, surveillance, zoning
- Cybersecurity in data center environments firewalls, network segmentation
- Backup power strategies UPS, generators, redundancy
- · Energy efficiency and sustainability
- Future trends: automation, remote monitoring, AI in data centers

#### Day 6 - Business Continuity and Disaster Recovery

- Principles of Business Continuity Planning BCP in Data Centers
- Design and Testing of Disaster Recovery DR Plans for Various Failure Scenarios
- Data Replication, Backup Strategies, and Recovery Point/Time Objectives RPO/RTO
- Integration of Cloud-Based Recovery Solutions and Hybrid Continuity Models

# Why Attend This Course: Wins & Losses!

- · Practical and up-to-date curriculum aligned with global standards
- Focus on operational excellence and effective incident response
- · Comprehensive coverage of technical, operational, and security aspects
- Inclusion of future trends such as automation and AI integration
- Prepares participants to immediately apply learned skills in real-world data center environments

# Conclusion

Today, data centers represent the backbone of any technology-driven organization. They are the central hub for operating digital systems, storing critical data, and supporting essential services. Through this comprehensive course, we ensure that participants gain in-depth knowledge and high-level practical skills to manage, operate, and monitor data centers in line with global best practices.

This course has been carefully designed to cover all technical, operational, and security aspects, with a strong focus on business continuity, performance efficiency, and achieving the highest standards of security and sustainability. It empowers participants to handle daily challenges and emergency situations with agility and professionalism, thereby reducing risks, maintaining infrastructure readiness, and ensuring customer and end-user satisfaction.





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