

Advanced professional course in Network

*Madrid (Spain)*

*15 - 19 September 2025*

UK Training

**PARTNER**



## Advanced professional course in Network

Code: IT28 From: 15 - 19 September 2025 City: Madrid (Spain) Fees: 5100 Pound

### Introduction

In today's digital age, designing computer networks is crucial for enabling organizations to achieve their business objectives efficiently and securely. The ability to craft robust, scalable, and innovative network architectures is essential for meeting the evolving demands of modern enterprises. This advanced course in network design is tailored to equip participants with the latest methodologies, technologies, and best practices in network architecture. Through a blend of theoretical learning and hands-on exercises, participants will gain the expertise needed to design cutting-edge networks that align with organizational goals and drive digital transformation.

### Objectives

- Provide a comprehensive understanding of network design principles, methodologies, and frameworks.
- Equip participants with advanced skills in assessing organizational requirements, analyzing network traffic patterns, and designing scalable and resilient network architectures.
- Explore emerging technologies and trends in networking, including cloud computing, software-defined networking SDN, network virtualization, and the Internet of Things IoT, and their implications for network design.
- Foster proficiency in selecting and integrating networking technologies and protocols to optimize network performance, security, and reliability.
- Develop the ability to create detailed network design documentation, including network diagrams, topology maps, and configuration guidelines.
- Enhance knowledge of network design best practices, standards, and compliance requirements, including considerations for regulatory compliance and data privacy.
- Provide hands-on experience with network design tools, simulation software, and real-world case studies to reinforce theoretical concepts and practical skills.
- Prepare for professional certifications in network design, such as Cisco Certified Design Associate CCDA or Cisco Certified Design Professional CCDP, through comprehensive coverage of exam topics and practice tests.

### Course Outlines

#### Day 1

- **Introduction to Network Design Principles**
  - Overview of network design methodologies and frameworks
  - Understanding organizational requirements and business goals
  - Principles of scalable, resilient, and secure network architectures

#### Day 2

- **Assessing Organizational Requirements**
  - Conducting needs analysis and requirements gathering



- Identifying business-critical applications and services
- Assessing network performance, capacity, and availability requirements

### Day 3

- **Analyzing Network Traffic Patterns**
  - Traffic analysis techniques and tools
  - Predictive modeling for network capacity planning
  - Identifying bottlenecks and optimizing network performance

### Day 4

- **Designing Campus and Data Center Networks**
  - Campus network design considerations and best practices
  - Data center network architectures: traditional vs. cloud-native
  - Integration of virtualization and cloud technologies in network design

### Day 5

- **Designing Wide Area Networks WANs and Security**
  - WAN design principles and technologies
  - Selecting appropriate WAN connectivity options
  - Implementing security and Quality of Service QoS in WANs
  - Hands-on lab exercises and case studies to apply design principles and troubleshoot issues



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