

Advanced professional course in Network

Barcelona (Spain)

29 December 2025 - 2 January 2026

UK Traininig

PARTNER



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Code: IT28 From: 29 December 2025 - 2 January 2026 City: Barcelona (Spain) Fees: 5100 Pound

Introduction

In today's digital age, designing computer networks is crucial for organizations to achieve their business objectives efficiently and securely. The ability to create robust, scalable, and innovative network architectures is a key skill required to meet the evolving demands of modern enterprises. This advanced network design course is specifically designed to provide participants with cutting-edge methodologies, technologies, and best practices in network architecture. Combining theoretical learning with hands-on exercises, participants will acquire the expertise to design state-of-the-art networks that align with organizational goals and drive digital transformation.

Course Objectives

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

- Understand key principles, methodologies, and frameworks for network design.
- Develop advanced skills to assess organizational needs, analyze network traffic patterns, and design scalable and resilient network architectures.
- Explore emerging technologies like cloud computing, software-defined networking SDN, virtualization, and the Internet of Things IoT, and their role in modern network design.
- Optimize network performance, security, and reliability by selecting and integrating appropriate networking technologies and protocols.
- Create detailed network design documentation, including diagrams, topology maps, and configuration guidelines.
- Gain proficiency in network design best practices, standards, and compliance requirements, including regulatory and data privacy considerations.
- Obtain practical experience using network design tools, simulation software, and real-world case studies.
- Prepare for professional certifications such as Cisco Certified Design Associate CCDA or Cisco Certified Design Professional CCDP.

Course Outlines

Day 1: Introduction to Network Design Principles

- Overview of network design methodologies and frameworks.
- Understanding organizational requirements and aligning them with business goals.
- Principles for creating scalable, resilient, and secure network architectures.

Day 2: Assessing Organizational Requirements

- Conducting needs analysis and gathering detailed requirements.
- Identifying critical applications and services essential for business operations.



- Evaluating network performance, capacity, and availability needs.

Day 3: Analyzing Network Traffic Patterns

- Techniques and tools for effective traffic analysis.
- Predictive modeling to plan for future network capacity.
- Identifying bottlenecks and optimizing network performance.

Day 4: Designing Campus and Data Center Networks

- Best practices for designing campus networks.
- Traditional vs. cloud-native data center network architectures.
- Integrating virtualization and cloud technologies into network designs.

Day 5: Designing Wide Area Networks WAN and Security

- Principles and key considerations for WAN design.
- Selecting the right WAN connectivity options.
- Implementing security protocols and Quality of Service QoS for WAN optimization.
- Hands-on lab exercises to troubleshoot and apply design principles.

Why Attend This Course? Wins & Losses!

- Learn the best practices in network design and security management.
- Gain advanced skills to analyze and optimize network performance.
- Prepare for professional certifications like CCDA and CCDP.
- Apply theoretical concepts through practical exercises and real-world case studies.

Conclusion

This advanced network design course offers professional training in network architecture and security management, equipping participants with the skills to ensure network efficiency and security in today's enterprises.

Enroll now to enhance your expertise in network administration, network security, and network design, and take your IT career to the next level.



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