

Advanced Course in Networking

Düsseldorf (Germany)

6 - 10 January 2025

UK Traininig

PARTNER



Advanced Course in Networking

Code: IT28 From: 6 - 10 January 2025 City: Düsseldorf (Germany) Fees: 4900 Pound

Introduction

In today's digital age, effective network design is crucial for organizations to achieve their business goals efficiently and securely. This advanced course is designed to provide participants with the latest methodologies, technologies, and best practices in network design. Through a combination of theoretical learning and hands-on exercises, participants will develop the skills needed to design innovative, scalable, and secure network architectures that align with organizational objectives and support digital transformation.

Course Objectives

- Provide a comprehensive understanding of network design principles and frameworks.
- Develop advanced skills in assessing organizational needs and designing scalable, resilient network architectures.
- Explore emerging technologies like cloud computing, software-defined networking SDN, and Internet of Things IoT, and their impact on network design.
- Learn to select and integrate networking technologies and protocols for optimal performance, security, and reliability.
- Create detailed network design documentation, including network diagrams and configuration guidelines.
- Understand network design best practices, standards, and compliance requirements, including data privacy considerations.
- Gain hands-on experience with 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 CDP.

Course Outline

Day 1: Network Design Principles and Requirements Assessment

- Introduction to network design methodologies and frameworks.
- Understanding organizational requirements and business goals.
- Conducting needs analysis and gathering requirements.
- Assessing network performance, capacity, and availability.

Day 2: Traffic Analysis and Network Architecture Design

- Techniques and tools for traffic analysis.
- Predictive modeling for network capacity planning.
- Designing scalable, resilient, and secure network architectures.
- Identifying bottlenecks and optimizing network performance.

Day 3: Designing Campus, Data Center, and WAN Networks



- Best practices for campus network design.
- Data center architectures: traditional vs. cloud-native.
- WAN design principles and selecting appropriate connectivity options.
- Integrating virtualization, cloud technologies, and security in network design.

Day 4: Network Security, Virtualization, and SDN

- Security by design principles and threat modeling.
- Integration of security controls and protocols.
- Concepts and benefits of network virtualization.
- Software-defined networking SDN architectures and their application in network design and automation.

Day 5: Documentation, Compliance, and Hands-On Lab

- Creating comprehensive network design documentation.
- Compliance requirements, standards, and data privacy considerations.
- Hands-on exercises using network simulation tools.
- Real-world case studies to apply design principles and troubleshoot issues.



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