

Advanced Course in Networking

13 – 17 December 2026
Cairo (Egypt)

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Introduction

In today's fast-paced digital world, network design plays a critical role in enabling organizations to achieve their objectives efficiently, securely, and with scalability. This advanced course is meticulously crafted to provide participants with an in-depth understanding of network design principles, methodologies, and emerging technologies. Whether you are focusing on supply chain network design, logistics network design, or enterprise network design, this course equips you with the essential skills to create optimized, secure, and resilient infrastructures that drive organizational growth and digital transformation.

By combining theoretical learning with hands-on exercises, this course empowers participants to design innovative networks that meet modern business demands, address performance challenges, and integrate advanced security measures.

Course Objectives

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

- Master network design principles to build robust and scalable network infrastructures.
- Develop advanced skills in assessing organizational needs and designing resilient networks.
- Explore emerging technologies like cloud computing, software-defined networking SDN, and the Internet of Things IoT and understand their impact on network design.
- Apply best practices and integrate cutting-edge technologies to enhance performance, security, and reliability.
- Create detailed documentation, including network diagrams, configuration guidelines, and comprehensive design proposals.
- Understand compliance requirements and ensure data privacy and security in network design.
- Gain practical experience using simulation tools, advanced network design methods, and real-world case studies.
- Prepare for professional certifications such as Cisco Certified Design Associate CCDA or Cisco Certified Design Professional CCDP.

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A graphic of a chessboard with several chess pieces (king, queen, rook, knight, and pawns) in gold and silver, set against a background of concentric circles.

Course Outlines

Day 1: Network Design Principles and Needs Assessment

- Introduction to network design frameworks and methodologies.
- Identifying organizational requirements and aligning them with business goals.
- Conducting needs analysis and assessing performance, capacity, and availability.
- Understanding the importance of network scalability and resilience.

Day 2: Traffic Analysis and Architecture Design

- Techniques and tools for traffic analysis to evaluate network demands.
- Predictive modeling for capacity planning and scalability.
- Designing network architectures optimized for performance and reliability.
- Identifying and resolving bottlenecks in network performance.

Day 3: Campus, Data Center, and Wide Area Network WAN Design

- Best practices for campus network design, including coverage and capacity planning.
- Designing data center networks: Traditional versus cloud-native models.
- WAN design principles and selecting appropriate connectivity solutions.
- Integrating network security measures and optimization techniques.

Day 4: Security, Virtualization, and SDN

- Implementing security-by-design principles in network infrastructures.
- Integrating firewalls, access control, and threat detection in network design.
- Exploring network virtualization for flexibility and efficiency.
- Understanding Software-Defined Networking SDN and its role in automation and scalability.

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

- Best practices for creating comprehensive network design documentation.
- Addressing compliance requirements and data privacy considerations.
- Hands-on lab exercises using simulation tools to apply design principles.
- Solving real-world case studies to reinforce learning.

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A graphic illustration of a chessboard with several chess pieces. A large gold king piece is in the foreground, with a silver pawn and a silver knight behind it. The board is checkered, and there are concentric circles in the background.

Why Attend this Course: Wins & Losses!

- Practical Expertise: Gain advanced skills in network design through interactive sessions and case studies.
- Career Advancement: Prepare for professional certifications like CCDA and CCDP, boosting your career prospects.
- Immediate Impact: Develop scalable and secure network infrastructures that support business growth.
- Future-Ready: Stay updated with the latest network design technologies like SDN and IoT.
- Enhanced Knowledge: Learn best practices for creating resilient networks that ensure high performance and reliability.

Conclusion

This advanced network design course offers a unique blend of theory, practical application, and industry insights, making it an invaluable opportunity for professionals looking to excel in network design. Whether you are working in logistics network design, supply chain networks, or enterprise environments, this course covers all aspects, from basic network design principles to advanced technologies.

By the end of the course, participants will be prepared to craft network design strategies, implement innovative solutions, and ensure compliance with industry standards. Enroll today to master the best practices, methodologies, and technologies that shape the future of network design and take your career to the next level!

A graphic of a chessboard with several chess pieces (a king, a queen, and a pawn) on it, set against a background of concentric circles.

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