



Certified Network Infrastructure Design Professional Part 1

5 – 9 April 2027
Barcelona (Spain)





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Introduction:

The Certified Network Infrastructure Design Professional CNIDP® Part 1 course is the first step in mastering the art of designing efficient, scalable, and robust network infrastructure systems. This program focuses on foundational principles and industry best practices for planning, designing, and implementing network infrastructures that meet diverse organizational needs.

Participants will understand network architecture, design methodologies, and project management essentials, enabling them to develop high-performance solutions that align with business objectives. This Certified Network Infrastructure Design Professional CNIDP® Part 1 course sets the groundwork for excellence in network design and infrastructure management for aspiring network designers and seasoned professionals.

The Certified Network Infrastructure Design Professional CNIDP® Part 1 course provides a guide to network infrastructure design. It covers corporate network infrastructure design, including network infrastructure for traditional and cloud network infrastructure design. Students will learn to plan and design a network infrastructure project focusing on secure network design infrastructure and wireless network infrastructure design.

This Certified Network Infrastructure Design Professional CNIDP® Part 1 training equips professionals with the skills to design a secure network infrastructure and effectively manage the guide to help the design and implementation process. A detailed network infrastructure design guide is provided to help learners understand what network infrastructure design involves and how to apply it in real-world scenarios.

Targeted Groups:

- Network Engineers and Technicians.
- IT Infrastructure Designers.
- Data Center Professionals.
- Project Managers in IT and Networking.
- System Integrators and Consultants.
- Telecommunications Professionals.
- Individuals Pursuing CNIDP® Certification.
- IT Professionals Seeking Advanced Network Design Skills.

Course Objectives:

At the end of this Certified Network Infrastructure Design Professional CNIDP® Part 1 course, the participants will be able to:

- Understand the fundamentals of network infrastructure design.
- Apply structured cabling standards in design projects.
- Develop scalable and efficient network architectures.
- Identify and mitigate risks in network infrastructure projects.
- Prepare detailed technical documentation for network designs.
- Align network infrastructure projects with business goals.
- Ensure compliance with industry standards and regulations.
- Enhance skills in project planning and resource management.

Targeted Competencies:

By the end of this Certified Network Infrastructure Design Professional CNIDP® Part 1 training, the participant's competencies will:

- Network Infrastructure Design Principles.
- Structured Cabling System Standards.
- Project Planning and Management for IT Networks.
- Data Center Design Fundamentals.
- Network Architecture and Topology Design.
- Risk Assessment and Mitigation in Network Projects.
- Technical Documentation and Reporting.
- Compliance with Industry Standards and Best Practices.

Course Content:

Unit 1: Fundamentals of Network Infrastructure Design:

- Overview of network design principles and methodologies.
- Importance of scalability and reliability in network designs.
- Key components of network infrastructure: hardware and software.
- Introduction to structured cabling systems and their applications.
- Understanding network performance metrics and optimization.

Unit 2: Structured Cabling Systems and Standards:

- Detailed analysis of cabling types: copper and fiber optics.
- Compliance with TIA/EIA and ISO/IEC standards.
- Design considerations for horizontal and backbone cabling.
- Implementation of labeling and cable management best practices.
- Testing, certification, and documentation of cabling systems.

Unit 3: Network Architecture and Topology Design:

- Exploration of different network topologies: star, mesh, and hybrid.
- Designing networks for scalability and high availability.
- Integration of data centers, cloud systems, and remote networks.
- Best practices for redundancy and fault-tolerant designs.
- Application of logical and physical network diagrams.

Unit 4: Project Management in Network Infrastructure Design:

- Introduction to project lifecycle and phases in network design.
- Budgeting and cost estimation for network infrastructure projects.
- Resource allocation and timeline development.
- Risk identification, analysis, and mitigation strategies.
- Collaboration and communication with stakeholders.

Unit 5: Technical Documentation and Industry Compliance:

- Preparing comprehensive design reports and project plans.
- Utilizing software tools for network modeling and simulation.
- Ensuring compliance with legal and regulatory requirements.
- Adhering to industry standards and certifications in design projects.
- Continuous monitoring and updating of network infrastructure.