

Certificate in IT Networking Essentials - Management and Troubleshooting



The Certificate in IT Networking Essentials - Management and Troubleshooting is a program designed to provide you with the foundational knowledge and skills required for managing and troubleshooting computer networks. It provides a comprehensive understanding of computer networking fundamentals, including protocols, architectures, topologies, devices, and security concepts. Learners will gain knowledge of various networking technologies, such as LANs, WANs, and WLANs, and understand the roles of protocols like TCP/IP, DNS, DHCP, and HTTP. The OSI model and its layered approach to network communication will be explored, along with security measures like access control, encryption, firewalls, and intrusion detection/prevention systems. The course also covers network security monitoring techniques and emerging trends in networking technologies to ensure you are equipped to address potential risks and challenges in the field.

Syllabus & Skills covered (60 hours)



- Apply proficiency in configuring IP addressing, subnet masks, default gateways, and DNS settings.
- Analyze basic concepts of network security, including authentication, encryption, firewalls, and intrusion detection/prevention systems.
- Identify and resolve common networking problems, such as connectivity issues, slow performance, and hardware failures.
- Synthesize networking concepts into real-world scenarios, such as setting up home or small business networks.
- Create configurations for routers and switches based on networking requirements.
- Identify various types of network threats, vulnerabilities, and attack vectors.
- Evaluate network security monitoring tools to detect and analyze suspicious network activity.
- Apply troubleshooting skills to resolve common network security issues.
- Design wireless network solutions for diverse use cases.
- Predict future capacity requirements and analyze network performance metrics.

Career Opportunities



- **Network Technician**
- **IT Support Specialist**
- **Help Desk Technician**
- **Systems Administrator**



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