

National Apprenticeship - Occupational Profile

Apprenticeship Title	Computer Networking Associate
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NFQ Level	6
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Duration	2 Years
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Typical tasks/ responsibilities	The ICT Associate Professional Computer Networking Associate designs, installs, maintains and supports communication networks within an organisation or between organisations. Computer Networking Associates maintain high levels of network availability in order to provide maximum performance for their users, such as staff, clients, customers and suppliers. They understand network configuration, cloud, network administration and monitoring tools, and are able to give technical advice and guidance.
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On successful completion, the **Computer Networking Associate** will be able to:

Knowledge

- Understand and apply the principles of networking, protocols and associated technologies (specifically this should include the latest published versions of OSI layer model, IP, TCP/IP, routing and switching, WANs, LANs)
- Understand the causes and consequences of system failure including load balance and storage protocols and responds appropriately
- Understand the architecture of a typical business IT system, including hardware, OS, server, virtualisation, middleware and applications
- Understand and responds to security threats, firewalls and vulnerabilities
- Understand the importance of service level agreements, standards and/or agreed response times and operates within these parameters
- Understand and operate effectively in the business environment and responds to business issues related to computer networking
- Understand and apply the applied maths required to be a networking associate (e.g. algorithms, number systems, IT-related units of measurement, probability and statistics)

Skills

- Design simple networks from a well-defined specification and apply appropriate security products and processes
- Install and configure network components, including switches, routers and firewalls
- Optimise the performance of network systems and services
- Monitor, test and adjust network systems and performance to meet accepted standards using diagnostic tools, analysers and other equipment
- Apply diagnostic tools and techniques to identify the causes of network performance issues

Skills

Cont'd

- Apply structured approaches to troubleshooting network issues and repair faults in hardware, software products and the network
- Undertake system upgrades to network hardware, software and operating systems
- Integrate network related software into an existing network environment
- Interpret written requirements and technical specifications for network activities and maintain accurate records of network maintenance activities
- Log and respond to network service calls and provides technical network support to end users as required
- Document work done in accordance with agreed procedures

Competencies

- Logical thinking and creative approach to problem solving
- Maintain a productive, professional and safe work environment
- Communicate effectively in a variety of situations
- Analytical and problem solving skills
- Progress allocated tasks in accordance with reporting and quality systems
- Apply strong interpersonal skills when dealing with colleagues, customers and clients
- Flexible attitude
- Ability to work independently and to take responsibility
- A thorough approach to work
- Passion for IT

Industry/industries served by the apprenticeship

Network communication systems, hardware and cloud based systems are widely used across many sectors and potentially all sectors in a modern economy. Most ICT Computer Networking Associates will work in sectors which use computer network systems to support their activity. Others will work in the ICT sector industries who research, develop, design, manufacture, sell, install and maintain computer network systems and services.