NETWORK ENGINEER

The primary role of a network engineer is to design, install, maintain and support communication networks within an organisation or between organisations. Network engineers need to maintain high levels of operation of communication networks in order to provide maximum performance and availability for their users, such as staff, clients, customers and suppliers. They will understand network configuration, cloud, network administration and monitoring tools and be able to give technical advice and guidance.

Course Overview

Technical Competencies

- 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.
- 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 provide technical network support to end users as required.

Course code
AS4 NE

Award on successful completion
Apprenticeship Standard Network Engineer

Study type
Day Release

Block Weeks for Maths & English Functional Skills if required

Level
4

Start date
N/A

Duration
24 Months (This does not include your End Point Assessment)

Fees
£17,000 (16-18 years old = fully funded by government. 19+ years old 5% (£750) employer contribution to training)

Location
Worcester campus

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- Document work done in accordance with agreed procedures.
- Operate within the parameters of service level agreements, standards and/or agreed response times.
- Operate effectively in the business environment and responds to business issues related to network engineering.

Technical Knowledge and Understanding

- Understands and applies the principles of networking, protocols and associated technologies.
- Understands and applies the applied maths required to be a network engineer.
- Understands the causes and consequences of system failure including load balance and storage protocols and responds appropriately.
- Understands the architecture of a typical business IT system, including hardware, OS, server, virtualisation, middleware and applications.
- Understands and responds to security threats, firewalls and vulnerabilities.

Underpinning Skills, Attitudes and Behaviours

- Logical and creative thinking skills.
- Analytical and problem-solving skills.
- Ability to work independently and to take responsibility.
- Can use own initiative.
- A thorough and organised approach.
- Ability to work with a range of internal and external people.
- Ability to communicate effectively in a variety of situations.
- Maintain productive, professional and secure working environment.

Entry requirements

A level 3 apprenticeship or other relevant qualifications

Maths & English GCSE Grade 4 or above.

Methods of assessment

Summative Portfolio

In the summative portfolio apprentices present evidence from real-work projects, illustrating the application of all the knowledge, skills and behaviours set out in the standard.

The evidence contained in the portfolio will comprise a small number of complete and/or discrete pieces of work which, together, cover the totality of the Standard. It will showcase their very best work, enabling them to demonstrate how they have applied their knowledge and understanding in a real-work environment to achieve real-work objectives.

Synoptic Project

The synoptic project presents evidence from a business-related project testing the application of a selection of the knowledge, skills and behaviours defined in the standard. Each project will specify which selection of knowledge, skills and behaviours it is designed to test.

The project is designed to assess apprentices in a consistent way, irrespective of their workplace and their role within their company. Generally, the project will take 5 working days to complete and must therefore be completed outside of day-to-day work pressures.

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Employer Reference

The employer will provide a reference setting out their views of the quality of the apprentice's work.

The Assessment Organisation will provide guidance and a simple template seeking employers' comments against the grading minimum standards, criteria and dimensions.

The employer will not be asked to grade or provide a rating, as they do not have the comparative experience or evidence.

Interview

The interview is a structured discussion between the apprentice and their independent assessor, focusing on the summative portfolio and the synoptic project, with reference to the employer reference as appropriate.

It covers both what the apprentice has done in terms of the standard of their work, and how they have done it.

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