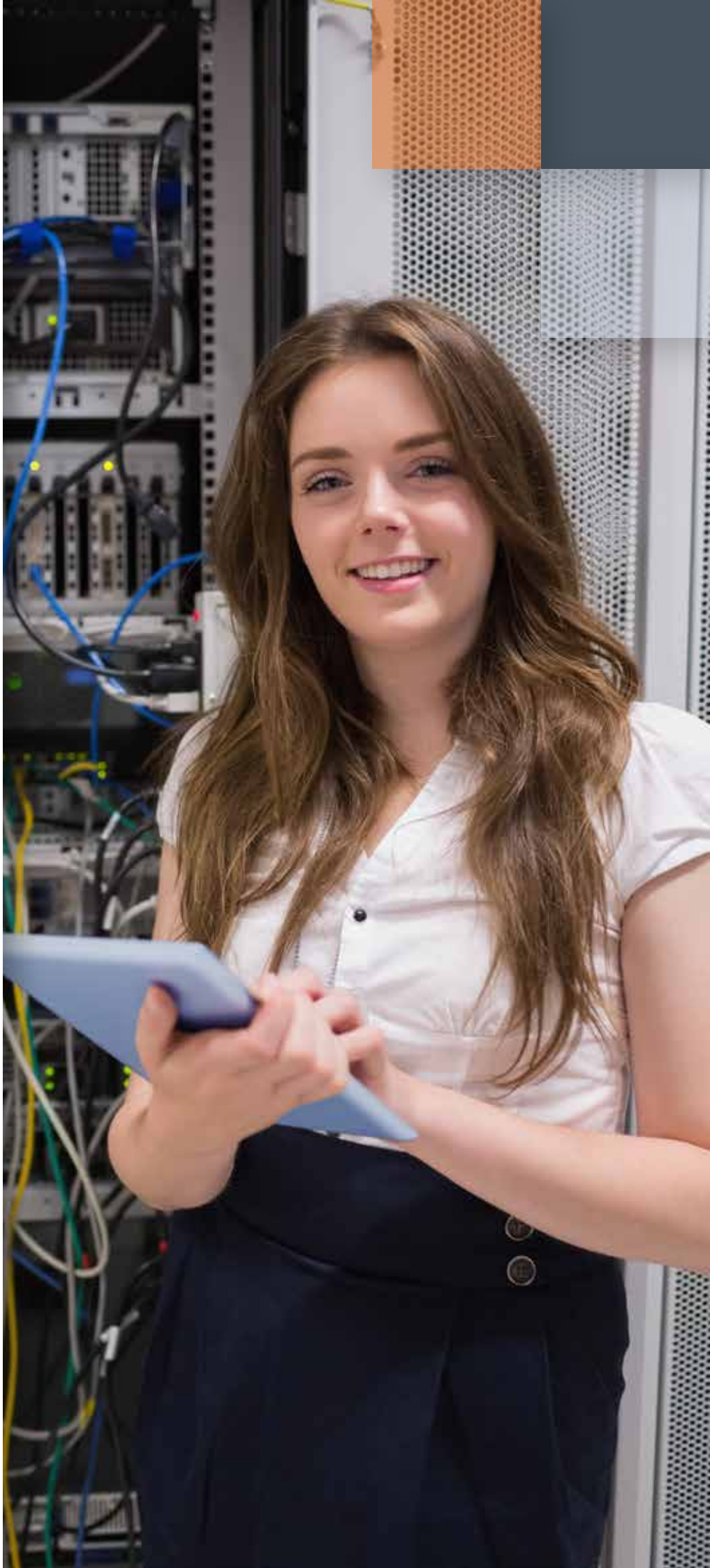


NETWORK ENGINEER

LEVEL 4 APPRENTICESHIP



WHAT IS IT?

A Network Engineer primarily designs, installs, maintains and supports organisation's communication networks. By providing this quality service they ensure the communication networks ensuring maximum performance for users such as staff and clients.



Entry requirements:

Set by the employer but recommend A Levels or Level 3 Apprenticeship

Course Length:

18 – 24 months

Qualification:

Level 4 Network Engineer, COMPTIA Network +, BCS

Functional Skills:

Maths and English level 2 must be completed prior to end-point assessment

Progression:

Can be used as entry onto the register of IT technicians confirming SFIA level 3 professional competence and those completing the apprenticeship are eligible to apply for registration

THE STANDARD

The new standards were designed by companies such as Microsoft, Cisco, HP and IBM for employers. They are about having the knowledge, skills and behaviours needed by employees to do their role effectively and efficiently.

Mentor

You will assign a mentor from your team who should have relevant, in post experience or qualifications to support the apprentice with their learning aims and role requirements.

Tutor/Coach

Our experienced tutor/coach will deliver 25 days of the knowledge component and support the apprentice and mentor during workplace visits.

Timescale

Below are suggested timescales for the apprenticeship, however we can be flexible with the times to suit your business needs.

Month 1-15:	Knowledge component – delivered over 25 days either 1 day per week for 25 weeks or 4 days a week.
Month 1-15:	Competency – delivered by bi-weekly Skype and monthly workplace visits from your coach/tutor.
Month 12-18:	Exam release for assessments taken at TCHC Digital Technology Centre.
Month 15-18:	End-point Assessment – a project undertaken at work with a BCS examiner to demonstrate competency.

Technical Competencies

Can design simple networks from a well-defined specification and apply appropriate security products and processes.

Can install and configure network components, including switches, routers and firewalls.

Can optimise the performance of network systems and services.

Can monitor, test and adjust network systems and performance to meet accepted standards using diagnostic tools, analysers and other equipment.

Can apply diagnostic tools and techniques to identify the causes of network performance issues.

Can apply structured approaches to troubleshooting network issues and repair faults in hardware, software products and the network.

Can undertake system upgrades to network hardware, software and operating systems.

Can integrate network related software into an existing network environment.

Can interpret written requirements and technical specifications for network activities and maintain accurate records of network maintenance activities.

Can log and respond to network service calls and provide technical network support to end users as required.

Can document work done in accordance with agreed procedures.

Can operate within the parameters of service level agreements, standards and/or agreed response times.

Can 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 (specifically this should include the latest published versions of OSI layer model, IP, TCP/IP, routing and switching, WANs, LANs).

Understands and applies the applied maths required to be a network engineer (e.g. algorithms, data, binary, probability and statistics).

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.

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.

Vendor Qualifications

COMPTIA Network +

BCS Knowledge Module Exam in Network Systems and Architecture

BCS Knowledge Module Exam in Network Security

ASSESSMENT GATEWAY

Before End-point Assessment the apprentices must be judged to be ready and have achieved:

- Level 2 English and Maths
- Completed and passed the vendor and BCS qualifications
- Pass BCS knowledge modules:
 - Network Principles
 - Network Systems and Architecture
 - Network Security
- Project completed
- Portfolio completed

END-POINT ASSESSMENT AND COMPLETION

The End-point Assessment takes place once the apprentice has successfully achieved the gateway assessment. On completion of End-point Assessment the apprentices will receive a pass, merit or distinction depending on the outcome of their assessment.

Under the new standards an apprentice will complete only after they have been independently assessed – this is called End-point Assessment. The type of assessment varies but for this Apprenticeship it consists of the following:



EMPLOYER REFERENCE

Provides the employer's perspective on how the apprentice has performed in the workplace and how they have applied their knowledge, competencies and behaviours in work projects.

PORTFOLIO

Provides evidence against the totality of the standard, based on the application of knowledge, competence and behaviours to real work projects in the work environment. This is key to ensure the validity of the final assessment decision.

PROJECT

Provides evidence against a selected set of knowledge, competencies and behaviours against a pre-defined project undertaken in a controlled environment. This is key to ensure consistency and comparability, increasing the accuracy of the assessment decision.

INTERVIEW

Provides an opportunity for further evidence to be gathered and/or evidence to be explored in more detail against any of the knowledge, competence or behaviours. This also increases accuracy and validity.

CONTACT US

See how we can support your business.

TCHC

Phone: 01923 698485
Email: dtc@tchc.net
Visit: www.tchc.net/digital-apprenticeships

INDEPENDENT END POINT ASSESSMENT

The government has appointed the British Computer Society as the end point Assessor for all Digital Apprenticeships.

COMPLETION

The Independent end assessor confirms that each assessment element has been completed. The apprenticeship includes pass, merit and distinction grades with the final grade based on the apprentice's combined performance in each assessment activity.

In order to achieve the apprentice is required to pass each of the assessments. Should an apprentice fail one assessment activity this should be retaken as soon as the apprentice is ready and when practicable for the business.

ADDRESS

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