THE APPRENTICE
and **TRAINING PARTNERSHIP**

There is nothing standard about the new apprenticeship Standards!
In 2017 modern apprenticeships underwent a major overhaul. Apprenticeships now represent the very best in vocational Further Education programmes and benefit the widest range of employees and employers for new career starts, upskilling for progression or changes in career direction.

Programme Overview:

The primary role of a Network Engineer is to design, install, maintain and support IT communication networks within an organisation or between organisations.

Network Engineers need to maintain optimal levels of performance, operation, security, for network users by correct configurations and use of appropriate monitoring tools.

They will understand configuration for wired, cloud and hybrid networks, and be able to convey technical advice and guidance in layman's terms.

Who is it for?

Typical job roles will include;

- Network Technician
- Network Engineer
- Systems Engineer
- Network Administrator

Entry Requirements:

Entry requirements exist for all funded Further Education programmes. These ensure the value, gain and success of the programme. The ATP will conduct the processes with employers and prospective apprentices to determine correct funding eligibility.

Job role eligibility (known as Competency Role Map):

The job role must contain opportunity for an apprentice to practice the content set out in the apprenticeship Standard to achieve vocational competency. Apprentices must have the opportunity to practice the knowledge taught in training sessions in order to convert new knowledge in to sustainable skills applied in the workplace.

Each apprenticeship requires a portfolio of evidence this will showcase the apprentice's work and will be reviewed by the apprenticeship assessment organisation to determine how well new knowledge has been successfully utilised vocationally. If a job role is close to the eligibility criteria we will consult with employers to see if adjustments can be made to ensure criteria is met.

Initial Assessment of existing knowledge and skills:

A prospective apprentice must stand to gain significant knowledge and skills from an apprenticeship. If the apprenticeship is too advanced for them or if they already know much of the knowledge and skills the apprenticeship would provide then they may not be eligible for the funding.

The ATP will review existing qualifications, knowledge and skills to determine if the prospective apprentice will benefit from the proposed apprenticeship such that it meets the funding criteria. In most instances this is very straightforward, however in some instances funding can be specially authorised for reduction in order to fund the parts of an apprenticeship that would be relevant. The ATP will provide the assessment for these possibilities.

The Level 4 Network Engineer apprenticeship is highly technical. Whilst employers can select their own entry criteria, prospective apprentices should have achieved at least 5 GCSEs including English and Mathematics and hold a minimum of 120 UCAS points, or equivalent in relevant subject areas.

In many cases this type of apprenticeship can demand a higher capability of English and maths than is taught at GCSE or A-Level. For example, advanced report writing, budgeting, complex structured explanations and/or advanced formulae and statistics. The ATP will provide both functional and advanced English and maths diagnostics and teaching to ensure each apprentice is fully supported in these areas.

Programme Duration:

This apprenticeship is delivered over 24 months for full-time employees. For part-time employees the term may be extended depending on the contracted hours.

Standard Delivery Model:

Apprenticeship training is delivered through a blend of weekly live web-based classrooms and regular face-to-face mentoring sessions that are held on a one-to-one basis in the workplace.

These live classrooms are held through Microsoft Teams. This software provides the full suite of educational tools including everything you would find in a conventional classroom and more e.g. live open interactions, private breakout rooms, note and question queues and interactive illustration boards. We can also use movie green screen technology for lesson illustrations.

A full timetable for the training, mentoring, exams and assessments is provided at the outset. Progress is reviewed at 12-week intervals in a meeting between the mentor, apprentice and employer (typically the apprentice's line manager).

Employers and apprentices have full visibility of progress in real-time by accessing the e-portfolio system, alternatively regular updates can be provided by other means if preferred.

End Point Assessment (EPA):

Aside from qualifications that can be obtained by doing an apprenticeship, the most important and valuable goal is what has been achieved during the programme.

Successful apprentices will obtain a Pass, Merit or Distinction in their apprenticeship. The way a Pass, Merit or Distinction is determined is at a stage called End Point Assessment which takes place once all the leaning has been completed. Like all examinations, a mock will take place before the final assessment.

Once all components of the apprenticeship have been achieved including the mock, a final review is conducted to ensure everything has been covered, this is called gateway. Then the apprentice will undergo their End Point Assessment.

The EPA for this programme consists of:

1. Portfolio of Evidence demonstrating work on 6-8 projects covering all the standard criteria

2. Employer Reference built over the course of the apprenticeship during the 12 week reviews, covering all the standard criteria

3. Synoptic Project, a business project completed in the final stages of the apprenticeship (this can sometimes include a virtual lab where appropriate), taking between 10-40 hours over a maximum of 2 weeks

4. A structured interview with the assessors – exploring the project, portfolio of evidence and employer reference
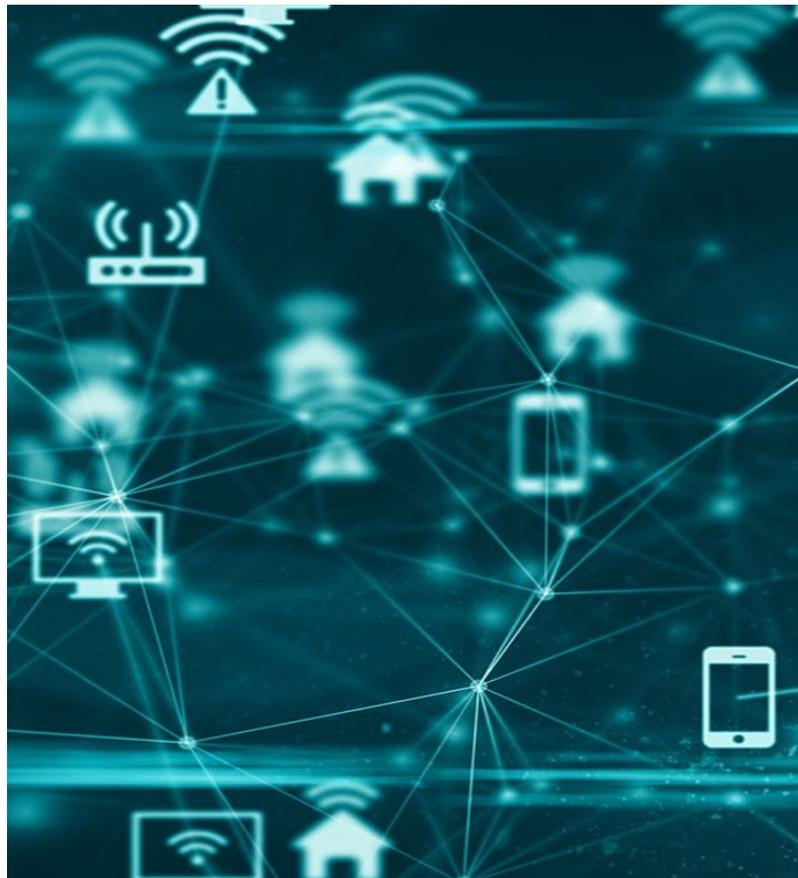
Programme Structure:

Technical Competencies:

- Design simple networks from a defined specification and apply appropriate security products and processes

- Install and configure network components, including switches, routers and firewalls

- Optimise 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 causes of network performance issues

- Apply structured approaches to troubleshooting issues and faults in hardware, software products and the network

- Undertake system upgrades to network hardware, software and operating systems

- Integrate network related software into existing network environment

- Interpret written requirements and technical specifications for network activities

- Maintain detailed and accurate records of network maintenance activities

- Log and respond to network service calls and provide technical network support to end users

- Document work undertaken 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 respond 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 mathematics required to be a network engineer e.g. algorithms, data, binary, probability and statistics

- Understands causes and consequences of system failure including load balancing and storage protocols

- Understands the architecture of a typical business IT system, including hardware, OS, server, virtualisation, middleware and applications

- Understands and responds to security threats and vulnerabilities

Underpinning Skills, Attitudes and Behaviours:

- Logical and creative thinking

- Analytical and problem solving

- Personal responsibility and independent working

- Personal initiative

- Thorough and organised approach

- Ability to work with colleagues and clients

- Communicate effectively in a variety of situations

- Maintain productive, professional and secure working environment
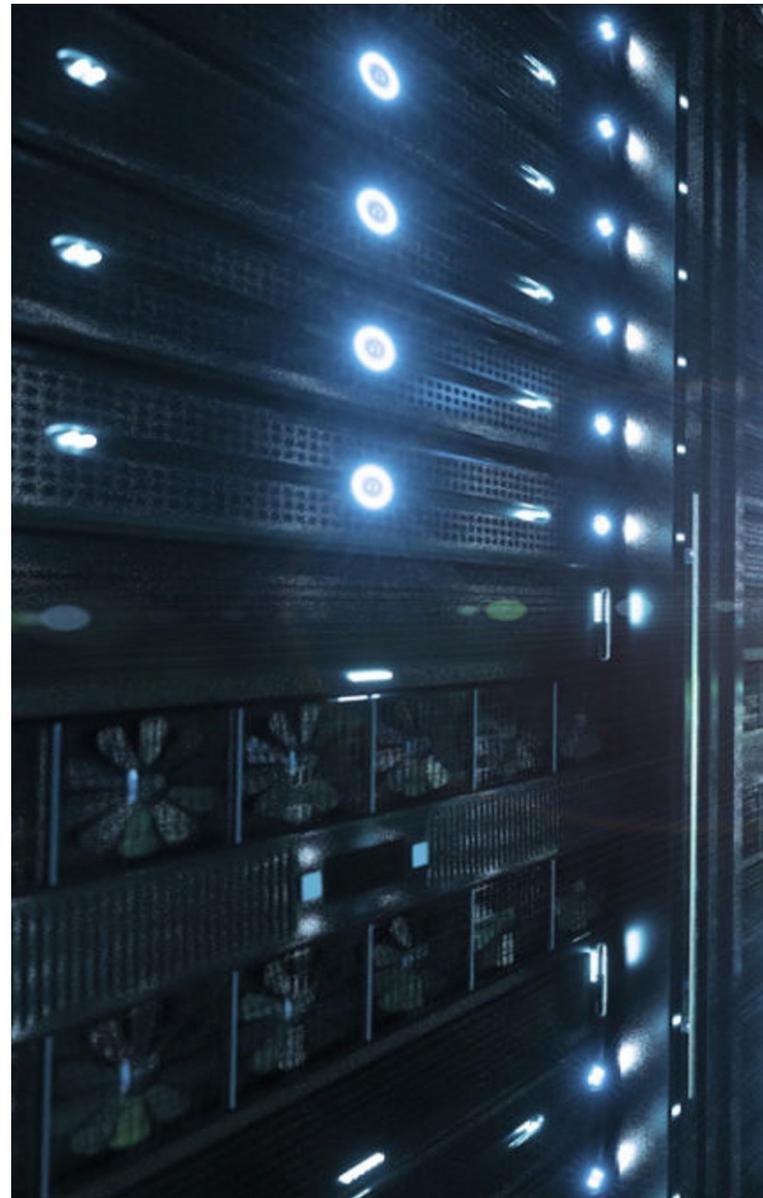
Professional Qualifications:

Apprentices must achieve one internationally recognised vendor or professional qualification which exempts them from one of the Ofqual regulated knowledge modules.

Knowledge Module 1

BCS Network Principles

OR;

CCNA

Knowledge Module 2:

BCS Network Systems and Architecture

Knowledge Module 3:

BCS Network Security

OR;

Security +

The designated trainer will support the employer and apprentice throughout the programme as a single point of contact for questions and queries. This includes additional support for portfolio and project preparation, along with any advice and guidance needed.

Progression:

On completion, apprentices may choose to register with the BCS under the register of IT technicians to support their professional career development and progression.

Next steps:

To configure an ideal apprenticeship we will meet with you, discuss your needs, present the options and collaborate to determine the best apprenticeships to meet your needs. We will provide ongoing support including:

- Recruitment of candidates

- Quality assured information advice and guidance

- Updates and information on legislation and funding

- Support and guidance for apprentice and employer throughout the apprenticeship

- Access to a comprehensive suite of resources and support material via OneFile

- Industry specialist qualified trainers and mentors