SPECIFICATION - LEVEL 4
NETWORK ENGINEER v1.4 (ST0127)

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Introduction

The Network Engineer Level 4 apprenticeship develops the competence required to install, configure, maintain, and support physical, virtual, and cloud-based network infrastructure across a wide range of organisations and sectors. Apprentices will work with local, wide area, and hybrid networks, ensuring systems operate securely, efficiently, and in line with organisational requirements. The role involves monitoring network performance, troubleshooting faults, maintaining connectivity, and implementing changes to optimise service. Network Engineers may work independently or as part of a team, interacting with technical and non-technical stakeholders, either face to face or remotely, to deliver reliable, secure, and compliant network solutions.

Key Information	
Name	Network Engineer ST0127
Level	4
Duration	24 months on-programme, 3 months EPA window
Funding Band	£19,000
Prerequisites and Entry Requirements	Before final assessment of the qualification, the Learner must be employed in a relevant role, meet Gateway requirements before taking the End-Point Assessment. have completed a portfolio of evidence and, if applicable, have passed the required Functional Skills. There are no mandatory qualifications required for this this End-Point Assessment.
Methods of Assessment	There are two assessment methods, simulated assessment and a professional discussion (underpinned by a portfolio of evidence).
Simulated Assessment	The apprentice will work within a secure virtual lab environment to complete the required tasks. The assessment must be overseen by an EPAO-approved invigilator. Invigilation can be carried out face-to-face, online using a live video feed or via approved proctoring software.
Grading	Learners will be assessed across all assessment components and awarded a grade of Fail, Pass, or, where applicable, Distinction. The results from each assessment method will be combined to determine the overall grade of a Fail, Pass, Merit. or Distinction. Grading combinations and criteria are set out in the End-Point Assessment Plan and associated guidance documents.
Link to assessment plan	Network engineer / Skills England

End-Point Assessment Objective

The End-Point Assessment (EPA) confirms that the apprentice has achieved the required competence to work independently as a Network Engineer. This includes the ability to install, configure, monitor, maintain, and troubleshoot network infrastructure, provide technical support to users, and ensure solutions are secure, efficient, and compliant with legislation and organisational policies. Apprentices must demonstrate they can work effectively with internal and external stakeholders, communicate technical information clearly, and apply problem-solving skills to deliver high-quality network services across a range of environments.

Programme Structure

Throughout the programme, apprentices will gain practical skills and underpinning knowledge in a variety of settings. They will be employed in a relevant role for typically 24 months, during which they will compile a portfolio of evidence with support from their assessor. The assessor will monitor progress against the standard to ensure the apprentice is fully prepared for the EPA.

Available Support

Sample assessment materials for the simulated assessment and professional discussion are available to approved training providers to support learner preparation and ensure consistency in delivery.

KSB Mapping Table

Knowledge	Assessment Method
K1 Causes and consequences of network and IT infrastructure failures.	Professional discussion
K2 The architecture, physical and virtual, of typical IT systems, including hardware, operating systems, server, virtualisation, voice and applications.	Simulated assessment
K3 The tools and techniques for optimising network performance.	Simulated assessment
K4 Diagnostic techniques and tools to interrogate and gather information regarding systems performance.	Professional discussion
K5 Organisational policies and procedures to ensure accurate recording and management of information.	Professional discussion
K6 Service level agreements, SLAs, contractual obligations and customer service when delivering network engineering activities.	Professional discussion
K7 Business continuity and disaster recovery and their role within in, including preservation of system configurations.	Professional discussion
K8 The purposes and uses of sockets pair and protocols.	Professional discussion
K9 Devices, applications, protocols and services at their respective open systems interconnection or, transmission control protocol or internet protocol models or layers.	Professional discussion
K10 The concepts and characteristics of routing and switching.	Simulated assessment
K11 The characteristics of network topologies, types, technologies and network modelling and or diagrams	Simulated assessment
K12 Wireless networks technologies and configurations.	Simulated assessment
K13 Concepts of cloud and cloud services.	Professional discussion
K14 Functions of network services such as domain name system and dynamic host configuration protocol.	Professional discussion
K15 Types of network maintenance.	Professional discussion

K16 Legislation and standards in the workplace and the impact on their role including sustainability, e.g. energy-efficient networking, hardware longevity, and e-waste reduction.	Professional discussion
K17 Troubleshooting methodologies and root cause analysis techniques for network issues.	Professional discussion
K18 Approaches to integrate services into a network.	Professional discussion
K19 Types of security threats to digital networks and risk mitigation.	Simulated assessment
K20 Approaches to network automation such as use of artificial intelligence.	Professional discussion
K21 Approaches to change management, Secure Access Service Edge SASE and Zero-trust networking when operating in a network environment.	Professional discussion
Skill	Assessment Method
S1 Apply tools and techniques when securely operating and testing networks.	Professional discussion
S2 Install and configure network components.	Simulated assessment
S3 Implement tools and techniques to monitor, identify, analyse and record systems performance in line with defined specifications.	Professional discussion
S4 Maintain security of the network against potential threats.	Simulated assessment
S5 Apply tools and or techniques to gather information to troubleshoot issues and or isolate, repair or escalate faults.	Professional discussion
S6 Communicate outcomes of tasks and record actions in line with organisational procedures.	Professional discussion
S7 Upgrade, apply and test components to systems configurations ensuring that the system meets the organisation's requirements and minimises downtime.	Professional discussion
S8 Interpret information and or specifications received from a manager, customer or technical specialist and accurately implement the defined requirements.	Simulated assessment
S9 Implement techniques to optimise systems or component performance in line with defined specifications.	Simulated assessment
S10 Apply the required level of responsibility when organising and prioritising work tasks, clients' or stakeholders' requests in line with SLAs and organisation processes.	Professional discussion
S11 Explain their job role within the business context to stakeholders to enable a clear understanding on both sides of what their remit is and convey technical constraints.	Professional discussion

S12 Operate securely, and apply process, policies and legislation within their business responsibilities.	Professional discussion
S13 Configure and maintain network addressing in line with customer requirements.	Professional discussion
S14 Ensure compliance of network engineering outputs with change management processes including Secure Access Service Edge SASE or Zero-trust networking.	Professional discussion
Behaviours	Assessment Method
B1 Work independently and demonstrate initiative, being resourceful when faced with a problem and taking responsibility for solving complex problems within their own level of responsibility.	Professional discussion
B2 Work within the goals, vision and values of the organisation.	Professional discussion
B3 Work to meet or exceed customers' requirements and expectations.	Professional discussion
B4 Commit to continued professional development, in order to ensure growth in professional skill and knowledge.	Professional discussion
B5 Work under pressure showing resilience.	Simulated assessment
B6 Work collaboratively with external stakeholders and others across the organisation.	Professional discussion