ST0127 Level 4 Network Engineer Assessment Plan

Introduction

This Apprenticeship Assessment Plan (AAP) sets out the requirements for the assessment of the Level 4 Network Engineer apprenticeship. It should be read in conjunction with the General Requirements for Apprenticeship Assessment. Where there is conflict between this AAP and the General Requirements, this AAP takes precedence. Assessment organisations must also comply with the relevant regulatory framework for apprenticeship assessment.

It is important that the assessment of apprentices is proportionate, valid, and provides reliable evidence of an apprentice's attainment of the relevant knowledge and skills. As such, assessment organisations must design assessments to ensure:

- employers have confidence that the apprentice has reached the expected performance standard
- apprentices are sufficiently secure in their knowledge and skills, so that they could demonstrate their competence in different contexts (for example, a different workplace)

Assessment Outcomes

The assessment outcomes group and summarise the knowledge and skills that must be demonstrated in assessments. All assessment outcomes must be assessed.

Knowledge and skills statements in **bold** are mandatory and must be assessed in every version of the assessment that is made available.

Assessment Outcome	Mapping
AO1: Network architecture configuration and maintenance Installation, configuration, and maintenance of physical and virtual network systems.	**K2,** K11, K12, K13, **K15**, K18, **S2**, S7, S8, S13
AO2: Network performance monitoring and optimisation Monitoring, analysing, and improving network performance using tools and techniques.	K3, K4, K10, K14, S1, **S3, S9**

Assessment Outcome	Mapping
AO3: Troubleshooting and fault resolution Identifying, diagnosing, and resolving network issues using structured methodologies	**K1**, K17, **S5**
AO4: Network security and risk mitigation Securing networks against threats and applying compliance with security protocols and legislation.	**K16**, K19, K21, **S4, S12, S14**
AO5: Information management and business processes Accurate documentation, task prioritisation, and alignment with organisational policies, SLAs, and continuity planning.	**K5**, K6, **K7**, S6, **S10, S11**
AO6: Network protocols, models and automation Understanding and applying network protocols, models, and automation technologies.	K8, **K9, K20**,

Assessment requirements

Assessment organisations must set apprenticeship assessments. Assessment organisations should consider how technology and digital tools can support innovation and efficiency.

Assessment organisations must design apprenticeship assessments to include at least a **Simulation**

Additional assessment(s) must be selected from the following list of methods to ensure the assessment outcomes are met in full:

- **Professional discussion**
- **Portfolio**
- **Presentation**
- **Question and answer session**
- **Report**
- **Additional Simulation**

Apprentices may be assessed at any appropriate point during their apprenticeship programme.

Assessments may be designed to allow a centre or training provider to mark assessments. The Assessment organisation is responsible for ensuring all assessments are sufficiently reliable and valid, and for the accuracy of any centre or training provider marking.

Assessment organisations must have due regard to any relevant standards, guidance or other documents that may be published by professional bodies.

Performance descriptors

Performance descriptors describe the level of performance required to achieve a pass or distinction grade. Assessment organisations must design assessments that align with these descriptions.

Performance Category	Pass	Distinction
Applied Knowledge	Demonstrates sound understanding of network architecture, protocols, and performance tools to address non-routine network engineering problems. Applies theoretical and technical knowledge to configure, maintain, and secure physical and virtual network systems.	Applies network engineering knowledge with precision and confidence to enhance system performance and resilience. Demonstrates insight into emerging technologies such as cloud services and network automation to improve outcomes.
Applied Skills	Applies diagnostic and optimisation techniques to monitor and maintain network performance. Installs and configures network components and applies troubleshooting methods to resolve faults in line with organisational requirements.	Adapts advanced diagnostic and optimisation techniques with operational fluency to improve efficiency and minimise downtime, adding value to organisational infrastructure.
Regulatory and Procedural Awareness	Applies legislation, standards, and organisational procedures when maintaining network security and managing change. Operates within defined protocols for	Interprets and applies regulatory and procedural requirements with insight, proactively identifying implications of security protocols and sustainability standards. Makes informed decisions

	example SASE and Zero-trust frameworks.	in complex network environments.
Communication and Collaboration	Communicates clearly with stakeholders to interpret technical specifications and report outcomes. Collaborates with colleagues to deliver network engineering tasks aligned with SLAs and customer expectations.	Communicates and collaborates with confidence, tailoring technical explanations to diverse stakeholder needs and contributes to improved collaboration across technical and non-technical teams.
Information Use and Decision Making	Analyses system performance data and network diagnostics to make informed decisions. Demonstrates awareness of business continuity, disaster recovery, and the broader organisational impact of network engineering decisions.	Evaluates performance data from at least two sources to justify decisions. Demonstrates strong awareness of the strategic implications of network engineering activities, including risk mitigation and service continuity.
Responsibility and Autonomy	Takes responsibility for configuring and maintaining network systems within defined parameters. Manages own workload and prioritises tasks in line with SLAs and organisational processes, ensuring safe and consistent performance.	Proactively manages own work and coordinates others in network engineering tasks. Uses sound judgment to allocate resources, assess risks, and prioritise actions that enhance service outcomes and organisational resilience.

Professional recognition

This apprenticeship aligns with the professional body recognition detailed in the occupational standard.

Please contact the relevant professional body for further information.