Qualification Specification

Accelerate People

Level 3 End-point Assessment for Information Communication Technician ST0973/AP01

Qualification Number 610/1305/5

Document Control Information

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V2.0	January 2023	Edits to wording throughout to focus on assessment criteria.
V2.1	February 2023	Edit to wording of assessment criteria S16 for support technician and removal of the same criteria for network technician.

Contents

Qualification Objective

The level 3 Information Communications Technician (ICT) apprenticeship is one of a suite of digital apprenticeships that have been designed by industry employers to meet a range of job roles across different industries and sizes of business.

The ICT apprenticeship standard includes three options for an apprentice to specialise in. These are Support Technician, Digital Communications Technician, and Network Technician. Each option has a set of specific assessment criteria that must be met for that option. There is also a core set of assessment criteria that must be met by all three options.

Accelerate People are an end-point assessment organisation (EPAO) for the digital apprenticeship standards that are defined by the Institute for Apprenticeships & Technical Education (IfATE). The apprenticeship standard and assessment plan can be found on the IfATE website.

As part of this apprenticeship all apprentices are required to complete an independent end-point assessment (EPA). The purpose of the EPA is to independently assess that any apprentice on this standard is competent in a relevant job role and can evidence meeting all the assessment criteria relating to the knowledge, skills and behaviours (KSB) outcomes.

The Level 3 Information Communications Technician Apprenticeship

Role Profile:

To deliver efficient operation and control of the IT and/or Telecommunications infrastructure (comprising physical or virtual hardware, software, network services and data storage) either on-premises or to end-users provisioned as cloud services that is required to deliver and support the information systems needs of an organisation. The occupation includes contributing to the preparation for new or changed services, operation of the change process, the maintenance of regulatory, legal and professional standards, the building and management of systems and components in virtualised and cloud computing environments and the monitoring of performance of systems and services in relation to their contribution to business performance, their security and their sustainability. The infrastructure technician makes their contribution through the application of infrastructure management tools to automate the provisioning, testing, deployment and monitoring of infrastructure components.

An Information Communications Technician provides support to internal and/or external customers, by using tools or systems to problem solve and trouble-shoot routine and non-routine problems. This occupation supports clients/customers with their systems. They achieve this through monitoring and maintaining the systems and/or platforms to maximise productivity and user experience.

They could be installing and configuring computer systems, diagnosing hardware and/or software faults, solving technical and applications problems, either remotely or in person. Organisations increasingly rely on computer and communications systems in all areas of their operations and decision-making processes. It's therefore crucial to ensure the optimal performance and maintenance of systems.

The work of an Information Communications Technician involves undertaking a vast array of specialist roles supporting business critical requirements and focus on customer solutions. Networking, Server, IT Essentials, Secure Communications, programming and databases are just an example of typical tasks and projects undertaken within the likely areas of employment.

Some examples of these issues are slow performance, connection problems, and an inability to access data.

For example:

A Support Technician in a Travel Agent would use a system to manage their customer bookings and when the system fails it needs rectifying rapidly in order to reduce the financial impact and damage to customer reputation. The business would contact a support technician to report the problem and either get it fixed or escalated to an engineer.

A Network Technician role is usually desk based but may involve visits to client's premises to resolve issues. For example, a Network Technician working in a university or a college they may be installing a computer lab as a training suite including cabling and hardware requirements. They may be required to install cloud services to support a business expansion and provide better network services.

In a contact centre environment, they may use network management tools to collect and report on network load and performance statistics to improve commercial outcomes.
In a retail bank they may contribute to the implementation of maintenance and installation work using standard procedures and tools to carry out defined system backups, restoring data where necessary.

A Digital Communications Technician working in a defence organisation operates as an Online Network Engineer at the heart of every mission solving complex issues, enabling the secure exchange of mission critical and often Top-Secret information. It is their responsibility to administer and provide specialist communications and IT equipment including classified information and cryptographic material to guarantee Operational Capability is delivered to the Command.

A digital communications technician working for a large telecoms organisation could be involved in the build, test and integration of end-to-end customer solutions to support customer order delivery. Not to mention the build, test and maintenance of core and mobile radio access networks, working with both internal and external customers.

Typical job titles:

Help Desk Support, First-Line Support, Office IT Technician, IT Support Analyst, IT Support Officer, Maintenance Support Technician, Data Centre Support Technician, and Cyber/Security support.

Duties:

This apprenticeship standard includes duties to support alignment between the job role and the apprenticeship standard. This standard has a core and option model, the core and specialism duties apprentices must demonstrate in their apprenticeship are listed. These duties are not assessed or graded as part of the EPA.

Core Duties:

Duty 1: Provide technical support to customers both internal and external through a range of communication channels.
Duty 2: Establish and diagnose ICT problems/faults using the required troubleshooting methodology and tools.
Duty 3: Interpret technical specifications relevant to the ICT task.

Duty 4: Apply the appropriate security policies to ICT tasks in line with organisational requirements.

Duty 5: Undertake the relevant processes with the relevant tools and technologies to resolve ICT technical issues.

Duty 6: Communicate with all levels of stakeholders, talking them through steps to take to resolve issues or set up systems, keeping them informed of progress and managing escalation and expectations.

Duty 7: Apply appropriate testing methodologies to hardware or software or cabling assets.

Duty 8: Practice guided continuous self-learning to keep up to date with technological developments to enhance relevant skills and take responsibility for own professional development.

Duty 9: Document or escalate ICT tasks as appropriate to ensure a clear audit trail and progression of issues.

Support Technician Duties:

Duty 10: Install and configure relevant software and hardware as appropriate for example: mobile apps, printers, projectors, scanners and cameras.

Duty 11: Address IT issues by prioritising in response to customer service level agreements.

Duty 12: Administer security access requirements and permissions for stakeholders escalating as necessary for example password resets.

Duty 13: Support the roll out of upgrades or new systems or applications.

Network Technician Duties:

Duty 14: Complete cabling tasks for example coaxial, copper, fibre or remotely.

Duty 15: Administer mobile devices on a network.

Duty 16: Deliver network tasks prioritising security with a view to mitigating and defending against security risks.

Duty 17: Install and configure relevant software and physical or virtual hardware as appropriate for example: network devices, switches and routers.

Digital Communication Technician Duties:

Duty 14: Complete cabling tasks for example coaxial, copper, fibre or remotely.

Duty 18: Install and commission computer or telecoms hardware.

Duty 19: Maintain computer systems or telecommunications networks.

Duty 20: Research solutions to maintain network communication architectures.

Duty 21: Monitor and report telecommunications or communications systems performance to enable service delivery.

Entry Requirements

Qualifications

Apprentices without level 2 English and maths will need to achieve this level prior to taking the EPA. For those with an education, health and care plan or a legacy statement, the apprenticeship's English and maths minimum requirement is Entry Level 3. A British Sign Language (BSL) qualification is an alternative to the English qualification for those whose primary language is BSL.

Experience

There are no pre-requisite knowledge, skills or understanding requirements defined for entry onto this qualification.

EPA Requirements

To successfully complete the level 3 ICT apprenticeship apprentices must achieve at least a pass in both EPA assessment methods. This EPA consists of two discrete assessment methods which have the following grades awarded.

- Assessment Method 1: Professional discussion underpinned by portfolio.
  - Pass.
  - Distinction.
  - Fail.
- Assessment Method 2: Project report with questioning.
  - Pass.
  - Distinction.
  - Fail.

All assessment methods must be taken within a six-month period, otherwise the entire EPA will need to be re-sat/re-taken.

EPA Gateway

For this apprenticeship all apprentices must spend a minimum of 12 months on programme, of which a minimum of 20% must be spent undertaking off-the-job training, before being eligible to undertake the EPA.

Before starting the EPA, an apprentice must meet the following gateway requirements:

- The employer is satisfied that the apprentice is working at or above the occupational standard.
- Apprentices must have compiled and submitted a portfolio of evidence to underpin the professional discussion.
- For level 3 apprenticeships and above, apprentices without English and mathematics at level 2 must achieve level 2 prior to taking their EPA.

Apprentices may request additional time if they require a reasonable adjustment. Information on how and when to apply is contained within the reasonable adjustments policy.

Once the apprentice is ready to enter gateway the following must be submitted to progress:

- Gateway form:
  - Demonstrating where evidence has met the outcomes listed on the standard.

- Demonstrating where the knowledge has been completed and uploading evidence of any certificates, if applicable.
- Confirming the preferred date for each assessment method.
- Advising Accelerate People if the apprentice requires any reasonable adjustments to be made during the EPA.
- Confirmation signatures that the apprentice is ready for the EPA.
- Evidence of Maths and English qualifications at Level 2 or above (or acceptable equivalent as specified in the entry requirements section).
- The apprentices completed electronic portfolio (for AM1), see Portfolio
- for further details.

The gateway form along with all documentation must be uploaded before the EPA can commence. Failure to upload any of the required documentation may delay the EPA start date.

Knowledge, Skills and Behaviours (KSB)

There are no mandatory vendor qualifications or knowledge modules for this apprenticeship. Apprentices are expected to be able to demonstrate competence against the assessment criteria specified within the assessment plan. The assessment criteria are based on the following KSBs, which apprentices are expected to be competent in before entering gateway. This standard has a core and option model, the core and specialism KSBs apprentices must demonstrate in their apprenticeship are listed for each individual assessment method.

Core Knowledge

K1: Approaches to back up and storage solutions.

K2: Basic elements of technical documentation and its interpretation.

K3: Principles of root cause problem solving using fault diagnostics for troubleshooting.

K4: Principles of basic network addressing for example binary.

K5: Basic awareness of the principles of cloud and cloud-based services.

K6: Fundamental principles of virtual networks and components.

K7: Principles of cultural awareness and how diversity impacts on delivery of support tasks.

K8: Methods of communication including level of technical terminology to use to technical and non-technical stakeholders.

K9: Different types of maintenance and preventative measures to reduce the incidence of faults.

K10: Key principles of Security including the role of People, Product and Process in secure systems for example access and encryption requirements.

K11: Fundamentals of physical networks and components.

K12: Approaches to documenting tasks, findings, actions taken and outcome for example, use of task tracking and ticketing systems.

K13: A basic awareness of legislation in relation to disposal of waste materials for example Waste Electronic and Electrical regulations.

Support Technician Knowledge

K14: Fundamental principles of operating systems, hardware system architectures and devices.

K15: Principles of remote operation of devices including how to deploy and securely integrate mobile devices into a network.

K16: Fundamental principles of peripherals for example: printers and scanners.

K17: Principles of virtualisation of servers, applications and networks.

K18: Principles of disaster recovery, how a disaster recovery plan works and their role within it.

K19: Principles of Test Plans, their role and significance.

K20: Fundamentals of purpose, creation and maintenance of asset registers.

K21: Approaches to system upgrades and updates and their significance.

K22: Approaches to interpretation of log files, event viewer and system tools.

K23: Basic elements of network infrastructure architectures including WiFi and wired networks.

Network Technician Knowledge

K24: Principles of OSI layers.

K25: Principles of cloud and network architecture (including WiFi).

K26: Principles of DNS / DHCP.

K27: Awareness of Cloud platforms, such as AWS, Azure, or GCP.

K28: Principles of LANs and WANs.

K29: Approaches to virtualisation of servers, applications and networks.

K30: Principles of network protocols.

K31: Principles of APIs and Web Services.

K32: The different types of cloud storage.

K33: Back up procedures and their importance.

K34: Principles of databases and migration.

K35: Key principles of Cloud Security and firewalls.

K36: DevOps methodology and tools, such as Puppet, Chef, Git, Docker.

K39: Different types of connectivity and cabling.

Digital Communication Technician Knowledge

K24: Principles of OSI layers.

K37: Basic elements of network communication architectures.

K38: Awareness of the purpose of firewalls.

K39: Different types of connectivity and cabling.

K40: Awareness of network protocols.

K41: The purpose of digital communications technologies.

K42: Main factors affecting network performance including faults and error control.

K43: Principles of digital test and diagnostic equipment usage.

K44: Basic principles of VPN and Remote Access Security for example transmission technologies.

Core Skills

S1: Interpret and prioritise internal or external customer's requirements in line with organisation's policy.

S2: Apply the appropriate tools and techniques to undertake fault finding and rectification.

S3: Apply Continuous Professional Development to support necessary business output and technical developments.

S4: Operate safely and securely across platforms and responsibilities.

S5: Communicate with all levels of stakeholders, keeping them informed of progress and managing escalation.

S6: Develop and maintain effective working relationships with colleagues, customers and other relevant stakeholders.

S7: Manage and prioritise the allocated workload effectively making best use of time and resources.

S8: Complete documentation relevant to the task and escalate where appropriate.

S10: Establish and diagnose the extent of the IT support task, in line with the organisation's policies and SLAs.

S11: Provide remote/face-to-face support to resolve customer requirements.

S12: Maintain a safe working environment for own personal safety and others in line with Health & Safety appropriate to the task.

Support Technician Skills

S9: Install or undertake basic software upgrades, either physically or remotely.

S13: Identify and scope the best solution informed by the system data associated with the task.

S14: Test and evaluate the system's performance and compliance with customer requirements.

S15: Escalate non-routine problems in line with procedures.

S16: Use basic scripting to execute the relevant tasks.

S17: Carry out routine maintenance across systems, (such as IT, Communications), ensuring organisational compliance at all times.

S18: Apply the necessary security, in line with access and/or encryption requirements.

Network Technician Skills

S19: Use a range of Cabling or Connectors equipment in line with technical requirements.

S20: Test and evaluate network environments.

S21: Monitor performance and usage of a network.

S22: Deploy applications on a network.

S23: Set up storage and data access for staff.

S24: Apply necessary security measures, in line with access requirements to a network.

S25: Carry out routine maintenance across network systems, ensuring organisational compliance always.

S26: Monitor network-related workloads including DNS and firewalls.

S27: Install or undertake basic upgrades, either physically or remotely.

Digital Communication Technician Skills

S19: Use a range of Cabling or Connectors equipment in line with technical requirements.

S28: Establish digital communication or telecommunications systems or networks for example through cabling and connecting equipment.

S29: Identify a range of tools and or diagnostic equipment, for example, Hardware or Software components, to resolve Communications or Telecommunications requirements.

S30: Undertake basic telecommunications activities, in response to an allocated task, designated responsibilities, instructions or customer requirements.

S31: Use information necessary to identify operational issues and rectify or escalate accordingly in line with policy.

Behaviours

B1: Works professionally, taking initiative as appropriate.
B2: Communicates technical and non-technical information in a variety of situations to support effective working with internal or external stakeholders.
B3: Demonstrates a productive and organised approach to their work.
B4: Self-motivated, for example takes responsibility to complete the job.

Assessment

AM1: Professional Discussion Underpinned by Portfolio

Portfolio

Training providers must work with the employer and apprentice to select the best evidence completed during the whole of the apprenticeship. All evidence should be real work tasks, and be clear, well documented and demonstrate competency against the assessment criteria listed in the assessment plan.

Typically, portfolios will contain five discreet high-quality tasks covering a range of different assessment criteria in each, although it is expected that there will be overlaps of assessment criteria in each task. Evidence sources may include:

- Written accounts of activities that have been completed.
- Photographic evidence and work products (annotated).
- Work instructions.
- Safety documentation.
- Technical reports.
- Drawings.
- Company policies and procedures as appropriate to the activities.
- Progress review documentation.
- Witness testimonies.
- Feedback from colleagues and/or clients.
- Video clips (maximum total duration 10 minutes); the apprentice must be always in view and identifiable.
- This is not a definitive list; other evidence sources are possible.

Where apprentices have worked on confidential or secure tasks, they should write high level statements about these tasks, but not upload any restricted information or data. Apprentices should be prepared to discuss further details during the professional discussion.

Any employer contributions should focus on direct observation of performance (for example witness statements) rather than opinions. The evidence provided must be valid and attributable to the apprentice; the portfolio of evidence must contain a statement from the employer and apprentice confirming this.

The portfolio should **not** include any methods of self-assessment or standalone knowledge statements. Any demonstration of knowledge must be in context of a specific work-related task.

Portfolios should be in an electronic format which must be submitted to Accelerate People at gateway. Paper-based portfolios will not be accepted. If an apprentice uploads a video clip this must be a file that can be uploaded with their portfolio. A link to a video will not be accepted and will not be used as part of their evidence.

Professional Discussion

The professional discussion will take place at least two weeks after the portfolio has been accepted at gateway.

- The professional discussion will take place online via video conferencing.
- Apprentices will need access to the internet and a working webcam for the entire duration.
- The apprentice must have access to a quiet room and, unless reasonable adjustments have been requested for additional support, be alone in the room.
- Apprentices must have photographic identification (ID) to verify their identity, if they do not produce any ID then the professional discussion will be cancelled.
- The discussion will last for 60 minutes with the independent assessor having the discretion to increase the time of the questioning by up to 10% to allow the apprentice to complete their last answer.
- A minimum of 10 questions will be asked and will be formed based on the evidence and grading requirements in the table below.
- Apprentices are allowed access to their portfolio throughout the discussion.

AM2: Project Report with Questioning

The apprentice will conduct a project and deliver the outcome in the form of an electronic based report to the EPAO after a maximum of 4 weeks of the EPA start date. Apprentices will prepare their project report once they have passed the gateway. Following submission of the project, questioning will take place with an independent assessor.

Project Report

Whilst completing the project, the apprentice should be subject to normal workplace supervision.

The project may be based on any of the following:

- A specific problem.
- A recurring issue.
- An idea/opportunity.
- Providing a service.

The project report has a maximum word limit of 1,500, with a tolerance of plus or minus 10% (anything outside of this will be marked as a failure). Appendices, references, diagrams and/or video clips of up to 10 minutes in length are not included in this total (the video clip must be a file that can be uploaded, not a link to a video). The project must map (in an appendix) how it evidences the relevant KSBs for this assessment method as per the table below.

As a minimum all project reports must include:
- An introduction.

- The scope of the project (including key performance indicators).
- How the outcomes were achieved.
- Research and findings.
- Project outcomes.
- Conclusions and potential areas for improvement.

Suitable projects ideas may be along the following lines (this list is for guidance and not exhaustive):

Support Technician

- Maintenance or repair of systems faults. This can either include the rectification of a fault which was causing full or partial loss of service to a customer or carry out either routine or proactive maintenance on a system to increase its capability or reliability. For either of these you should include an overview of the information you gathered to confirm performance of the solution. Your approach to the task including logical approach, confirmation of the solution performance after including the capture of information to support this.
- Support for the roll-out of installation and commission of new systems or upgrades. This can either be new equipment as part of the expansion of a system, or an upgrade which will add additional capability or functionality to a system. The project may include any of the pre-installation activity as well as the installation process and the post installation commission tasks (e.g., configuration, testing, handover, updating records etc.

Network Technician

- Installation and commission of networks. This can either be new equipment as part of the expansion of a network, or an upgrade which will add additional capability or functionality to a network. The project must include any of the pre-installation activity (e.g. network designs, engineering instructions, pre-installation checks, baselines, rollback plans) as well as the installation process and the post installation commission tasks (e.g. configuration, testing, handover, updating records etc.)
- Maintenance or repair of network equipment. This can either include the rectification of a fault which was causing full or partial loss of service to a customer or carry out either routine or proactive maintenance on a network to increase its capability or reliability. For either of these you should include; an overview of performance of the network before, the information you gathered to confirm the performance of the network before, your approach to the task including logical approach and confirmation of the network performance after including the capture of information to support this.
- Installation, configuration or maintenance task on either ICT related hardware or software, that provides a service or aids in restoration of services, either at a customer premises or within a fixed network.

Digital Communications Technician

- Installation and commission of telecoms networks. This can either be new equipment as part of the expansion of a telecoms network, or an upgrade which will add additional capability or functionality to a network. The project must include any of the pre-installation activity (e.g. network designs, engineering instructions, pre-installation checks, baselines, rollback plans) as well as the installation process and the post installation commission tasks (e.g. configuration, testing, handover, updating records etc.)

- Maintenance or repair of telecoms network equipment. This can either include the rectification of a fault which was causing full or partial loss of service to a customer or carry out either routine or proactive maintenance on a telecoms network in order to increase its capability or reliability. For either of these you should include; an overview of performance of the network before, the information you gathered to confirm the performance of the network before, your approach to the task including logical approach and confirmation of the network performance after including the capture of information to support this.
- Installation, configuration or maintenance task on either ICT related hardware or software, that provides a service or aids in restoration of services, either at a customer premises, within a fixed network or telecoms site or at a mobile cell site.

Questioning

Questioning will involve questions that focus on the content of the project report. It is a structured conversation with an independent assessor and is designed to draw out the best of the apprentice's competence and excellence and covers the assessment criteria assigned to this assessment method.

Key points:

- Questioning will take place online via video conferencing.
- Apprentices will need access to the internet and a working webcam.
- The apprentice must have access to a quiet room and, unless reasonable adjustments have been requested for additional support, be alone in the room.
- Apprentices must have photographic identification (ID) to verify their identity, if they do not produce any ID then the questioning will be cancelled.
- The questioning will last for 30 minutes with the independent assessor having the discretion to increase the time of the questioning by up to 10% to allow the apprentice to complete their last answer.
- A minimum of 5 questions will be asked based on the project report and will be formed based on the evidence and grading requirements in the table below.
- Apprentices are allowed access to their project report throughout the questioning.
- Questions will only be based on the evidence submitted for this assessment method.
- The questioning cannot commence until a minimum of one week after the project report has been submitted.

Assessment Criteria

AM1: Professional discussion underpinned by portfolio

KSBs	Pass Criteria	Distinction Criteria
Core		
Knowledge K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11, K13.	Explains the principles of system backup/storage. (K1) Describes basic elements of technical documentation, its interpretation, completion and importance in escalation as appropriate. (K2 S8)	Reviews the success of root cause problem solving where they have applied fault diagnostics for troubleshooting.' (K3) Evaluates the impact of People, Product and Process on secure

KSBs	Pass Criteria	Distinction Criteria
Skills S1, S2, S3, S4, S5, S6, S7, S8. **Behaviours** B1, B2, B3, B4.	Identifies and applies the principles of root cause problem solving using fault diagnostic tools and techniques for troubleshooting and rectification'. (K3, S2) Outlines the principles of basic network addressing for example: binary. (K4) Describes the key principles of cloud and cloud-based services. (K5) Analyses the fundamentals and principles of networks and components. (K6, K11) Explains how they interpret and prioritise internal or external customer's requirements in line with organisation's policy. (S1) Outlines the principles of cultural awareness and describes how diversity impacts on delivery of support tasks. (K7) Describes how they apply principles of Continuous Professional Development to support their contribution to delivery of necessary business output and technical developments. (S3) Identifies and applies methods of communication with stakeholders, selecting technical and/or non-technical language in reflection of the audience to inform progress and escalation and develop and maintain effective working relationships with them. (K8, S5 S6 B2) Describes different types of maintenance and preventative measures to reduce the incidence of faults. (K9) Explains how they ensure that they operate safely and securely across platforms and responsibilities applying the key principles of security including the role of People, Product and Process in secure systems. (K10, S4)	systems within their 'organisation.' (K10) Critically analyses their use of tools and techniques to undertake tasks such as installation, maintenance or fault rectification. (S2)

KSBs	Pass Criteria	Distinction Criteria
	Outlines how they have a basic awareness of legislation in relation to disposal of waste materials for example Waste Electronic and Electrical regulations. (K13)	
	Explains how they manage and prioritise the allocated workload effectively making best use of time and resources. (S7)	
	Explains their approach to work tasks which reflects their own professionalism and use of independent initiative. (B1)	
	Explains how they take a productive and organised approach to their work. (B3)	
	Discusses how they take a self-motivated approach to their work, for example how they manage their own time effectively and take responsibility to complete the job. (B4)	
Support Technician		
Knowledge K14, K15, K16, K17, K18, K19, K20, K23. **Skills** S11, S16.	Defines the principles of operating systems and describes the architecture of hardware systems and devices. (K14) Describes the principles of remote operation of devices including how to deploy and securely integrate mobile devices into a network. (K15) Outlines the principles of peripherals for example printers and scanners. (K16) Explains the principles of virtualisation of servers, applications, and networks (K17) Explains disaster recovery, and outlines how disaster recovery plans work with reference to a role they have played within one. (K18) Explains the principles of Test Plans by reference to their role and significance. (K19) Outlines purpose, creation, and maintenance of asset registers. (K20)	Evaluate and assess the organisations Asset Register and their role in updating it. (K20)

KSBs	Pass Criteria	Distinction Criteria
	Outlines the basic elements of infrastructure architectures including Wi-Fi and wired networks. (K23) Explains how they escalate non routine problems in line with procedures. (S15) Explains the use of basic scripting to execute relevant tasks. (S16)	
Network Technician		
Knowledge K24, K26, K27, K28, K29, K30, K31, K32, K34, K35, K39, K36. **Skills** S16, S19, S20, S21.	Explains the significance of OSI layers. (K24) Defines the principles of systems and networks including protocols. (K26, K28, K30) Sets out the approaches to virtualisation of cloud environments, servers, applications and network architectures. (K27, K29) Explains the principles of API's and Web Services. (K31) Explains the principles of databases and migration. (K34) Describes the principles and types of Cloud Storage, Cloud Security and Cloud firewalls. (K32, K35) Identifies the elements of DevOps methodology and tools, such as Puppet, Chef, Git and Docker. (K36) Describes the principles of testing and evaluating network environments. (S20) Explains how they monitor performance and usage of a network. (S21) Explains how they use Cabling or Connectors equipment in line with technical requirements. (K39 S19)	Reviews their approach to testing and, evaluation of network environments.' (S20)
Digital Communications Technician		
Knowledge K24, K38, K39, K40, K44.	Explains the significance of OSI layers. (K24) Outlines the purpose of firewalls. (K38)	Evaluates how they establish digital communication or telecommunications system or networks for example

KSBs	Pass Criteria	Distinction Criteria
Skills S19, S28, S31.	Explains their awareness of network protocols. (K40) Explains the basic principles of VPN and Remote Access Security for example transmission technologies. (K44) Explains how they use Cabling or Connectors equipment in line with technical requirements. (K39, S19) Explains how they establish digital communication or telecommunications systems or networks for example through cabling and connecting equipment. (S28) Describes how they use information necessary to identify operational issues and rectify or escalate accordingly in line with policy. (S31)	through cabling and connecting equipment. (S28)

AM2: Project report with questioning

KSB	Pass Criteria	Distinction Criteria
Core		
K12, S10, S11, S12.	Identifies and applies valid approaches to documenting tasks, findings, actions and outcomes. (K12) Demonstrates how they establish and diagnose the extent of the IT support task, in line with the organisation's policies and SLAs. (S10) Evidence how they provide remote/F2F support to resolve customer requirements. (S11) Demonstrates an approach to their own work and that of co-workers which reflects the HSE policies of the industry and organisation. (S12)	
Support Technician		
K21, K22, S9, S13, S14, S17, S18.	Demonstrates how they install or undertake basic upgrades, either physically or remotely and apply approaches to system updates, recognising their significance. (K21 S9) Evaluates the interpretation of log files, event viewer and system tools. (K22)	Critically analyses their optimisation of system performance to validate compliance with customer requirements. (S14)

KSB	Pass Criteria	Distinction Criteria
	Illustrates how they identify and scope the best solution informed by the system data associated with the task. (S13) Demonstrates how they test and, evaluate the system's performance and compliance with customer requirements. (S14) Demonstrate how they carry out routine maintenance across systems, (such as IT, Communications), ensuring organisational compliance at all times. (S17) Explain how they apply the necessary security, in line with access and/or encryption requirements. (S18)	
	Network Technician	
K25, K33 S22, S23, S24, S25, S26, S27.	Describes the principles of cloud and network architecture (including Wi-Fi). (K25) Explains the fundamental principles of back up including when and why to use system backup within technical network tasks. (K33) Demonstrates how they deploy applications on a network. (S22) Reviews the validity of their actions in setting up storage and data access for staff. (S23) Demonstrates the application of security measures and justifies them against network access requirements. (S24) Demonstrates how they carry out routine maintenance across network systems, ensuring organisational compliance. (S25) Describes how they monitor network-related workloads including DNS and firewalls. (S26)	Evaluates the effectiveness of routine maintenance across network systems, ensuring organisational compliance always. (S25)

KSB	Pass Criteria	Distinction Criteria
	Demonstrates how they install or undertake basic upgrades, either physically or remotely. (S27)	
Digital Communication technician		
K37, K41, K42, K43, S29, S30.	Explains the basic elements of network communication architectures. (K37) Outlines the purpose of digital communications technologies in general and within the project. (K41) Describes the factors affecting network performance within the project. (K42) Defines the principles of digital test and diagnostic equipment applying selected tools and equipment to resolve communications and/or telecommunications issues. (K43, S29) Demonstrates basic telecommunications activities, in response to an allocated task, designated responsibilities, instructions or a customer's requirements. (S30)	Evaluates and applies a range of tools and or diagnostic equipment, for example, Hardware or Software components, to resolve Communications or Telecommunications requirements. (K43 S29)

Grading

Each assessment method is graded individually and combined to give an overall grade. Assessment criteria do not appear in more than one assessment method, therefore an assessment criteria failed in one assessment method cannot then be demonstrated in the other assessment method. All EPA methods must be passed for the EPA to be passed overall.

Grades from individual assessment methods should be combined in the following way to determine the grade of the EPA as a whole:

Professional Discussion Underpinned by Portfolio	Project Report with Questioning	Overall Grading
Fail	Any grade	**Fail**
Any grade	Fail	**Fail**
Pass	Pass	**Pass**
Distinction	Pass	**Merit**
Pass	Distinction	**Merit**
Distinction	Distinction	**Distinction**

Re-sits and Re-takes

Apprentices who fail one or more assessment method will be offered the opportunity to take a re-sit or a re-take at the employer's discretion. The apprentice's employer will need to agree that either a re-sit or re-take is an appropriate course of action.

A re-sit does not require further learning, whereas a re-take does. Apprentices should have a supportive action plan to prepare for a re-sit or a re-take.

An apprentice who fails one or more assessment methods, and therefore the EPA in the first instance, will be required to re-sit or re-take the failed assessment method(s) only.

The timescales for a re-sit/re-take is agreed between the employer and EPAO. A re-sit is typically taken within two months of the EPA outcome notification. The timescale for a re-take is dependent on how much re-training is required and is typically taken within four months of the EPA outcome notification.

All assessment methods must be taken within a six-month period, otherwise the entire EPA will need to be re-sat/re-taken.

Re-sits and re-takes are not offered to apprentices wishing to move from pass to a higher grade.

Where any assessment method must be re-sat or re-taken, the apprentice will be awarded a maximum EPA grade of pass, unless the EPAO determines there are exceptional circumstances requiring a re-sit or re-take.

Specimen

All specimen materials, such as an example project, can be accessed by registered training providers from the knowledge area on ACE360.

Accelerate People

Accelerate People are an independent EPAO specialising in digital apprenticeship EPAs. If you have any questions or queries relating to this qualification specification or EPA, please contact us using the details below.

Registered training providers with Accelerate People can access further guidance material on the knowledge base on ACE360.

Contact Details:

Email: info@accelerate-people.co.uk.

Visit: www.accelerate-people.co.uk Registered training providers with Accelerate People can access further guidance material on the knowledge base on ACE360.

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Registered Apprenticeship Assessment Organisation Number: EPO 0475.