IfATE
Shaping skills training

Information communications technician

Details of standard

This standard has options. Display duties and KSBs for:

All

Occupation summary

This occupation is found in organisations, large and small, in all sectors, and within public, private and voluntary organisations.

Organisations increasingly rely on computer and communications systems in all areas of their operations and decision-making processes. It is therefore crucial to ensure the optimal performance and maintenance of systems. An Information Communication Technician (ICT) is critical to achieving this.

The broad purpose of the ICT occupation is 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 Information Communications 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 (ICT) 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.

An ICT could be installing and configuring computer systems, diagnosing hardware and/or software

faults, solving technical and applications problems, either remotely or in person. Some examples of these issues are slow performance, connection problems, and an inability to access data.

The work of an ICT 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.

In their daily work, an employee in this occupation interacts with a wide variety of internal or external users of digital systems, through digital channels, remotely and/or face to face.

An employee in this occupation will be responsible for prioritising systems support tasks as they arise and for monitoring and maintaining system performance. They may work alone or as part of a team but will escalate problems in line with their organisation's policies and Service Level Agreements. For example, if the task may not be completed on premise, it may have to be referred to an external specialist.

The Support Technician role is desk based resolving system user queries and resolving faults in a helpdesk environment. 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 may be desk or field-based resolving faults and issues with communications systems. For example, working in a defence organisation operates as an Online Network Technician they would be at the heart of every mission solving complex issues, enabling the secure exchange of mission critical and often Top-Secret information. It would be 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 telecom’s 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.

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Typical job titles include:

1st and 2nd line support telecoms technician
Cloud technician
Communications technician
Cyber or security support
Data centre support technician
First-line support
Help desk support
It field technician
It support analyst
It support officer
Maintenance support technician
Network field operative.
Network support
Office it technician
Telecommunications technician

Core occupation duties

DUTY	KSBS
Duty 1 Provide technical support to customers both internal and external through a range of communication channels	K2 K7 K8 K13 S1 S3 S7 S8 S9 S10 S11 S12 B1 B2 B4
Duty 2 Establish and diagnose ICT problems/faults using the required troubleshooting methodology and tools	K2 K3 K11 S2 S6 S9 S10 S11 S12 B1 B3
Duty 3 Interpret technical specifications relevant to the ICT task	K2 K4 K8 S1 S4 S5 S8 B1
Duty 4 Apply the appropriate security policies to ICT tasks in line with organisational requirements	K2 K10 S1 S4 S6 B1 B3
Duty 5 Undertake the relevant processes with the relevant tools and technologies to resolve ICT technical issues	K1 K2 K3 K4 K5 K6 K9 K10 K11 S2 S4 S6 S8 S12 B1 B3
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	K2 K7 K8 S1 S3 S4 S5 S7 S8 B1 B4
Duty 7 Apply appropriate testing methodologies to hardware or software or cabling assets	K2 K3 K4 K5 K6 K9 K10 K11 S2 S4 S6 S8 B1
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	S3 B1

Duty 9 Document or escalate ICT tasks as appropriate to ensure a clear audit trail and progression of issues	K1 K2 K3 K9 K10 K11 K12 K13 S1 S2 S4 S8 S9 B1 B3

Option duties

Support Technician duties

DUTY	KSBS
Duty 10 Install and configure relevant software and hardware as appropriate for example: mobile apps, printers, projectors, scanners and cameras.	K14 K15 K16 K18 K21 K23 S9 S14 S15 B3
Duty 11 Address IT issues by prioritising in response to customer service level agreements	K18 K22 S13 S15 B3
Duty 12 Administer security access requirements and permissions for stakeholders escalating as necessary for example password resets	K14 K15 K17 K18 K19 K20 K21 K22 S15 S16 S17 S18 B3
Duty 13 Support the roll out of upgrades or new systems or applications	K14 K15 K16 K17 K18 K19 K20 K21 S10 S13 S14 S15 S17 S18 B1 B3

Network Technician duties

DUTY	KSBS
Duty 14 Complete cabling tasks for example coaxial, copper, fibre or remotely.	K39 K40 S19 B1 B3 B4
Duty 15 Administer mobile devices on a network	K25 K29 K31 S26 S28 B1 B3
Duty 16 Deliver network tasks prioritising security with a view to mitigatingand defending against security risks.	K24 K25 K26 K27 K28 K30 K33 K38 S20 S21 S23 S24 S25 S27 B1 B4
Duty 17 Install and configure relevant software and physical or virtual hardware as appropriate for example: network devices, switches androuters	K32 K34 K35 K36 S20 S21 S22 S23 S24 S25 S26 S27 B3

Digital Communications Technician duties

DUTY	KSBS
Duty 14 Complete cabling tasks for example coaxial, copper, fibre or remotely.	K39 K40 S19 B1 B3 B4
Duty 18 Install and commission computer or telecoms hardware	K37 K38 K41 S19 S28 S30 B1 B2
Duty 19 Maintain computer systems or telecommunications networks	K24 K38 K41 K42 K43 K44 S29 S30 S31 B3
Duty 20 Research solutions to maintain network communication architectures	K37 K40 K41 K42 S17 S30
Duty 21 Monitor and report telecommunications or communications systems performance to enable service delivery.	K40 K41 K42 S31

KSBs

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: basic awareness of legislation in relation to disposal of waste materials for example Waste Electronic and Electrical regulations (WEEE)

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

K24: Principles of OSI layers

K25: Principles of cloud and network architecture (including Wi-Fi)

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 API's 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: Awareness of DevOps methodology and tools, such as Puppet, Chef, Git, Docker

K37: Basic elements of network communication architectures for example, hardware, software, protocols and connection mediums.

K38: awareness of the purpose of firewalls

K39: different types of connectivity and cabling for example physical and remote

K40: awareness of network protocols

K41: The purpose of digital communications technologies for example, hardware, virtual and cellular 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

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 maintaining the security of personal data of internal and external stakeholders

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

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

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

S10: Establish and diagnose the extent of the IT support task, in line with the organisation's policies and Service Level Agreements

S11: Provide remote/F2F 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

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 for example PowerShell, Linux

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

S19: Use a range of Cabling or Connectors equipment in line with technical requirements for example physically or remotely

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

S26: Monitor network-related workloads including DNS and firewalls

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

S28: Establish digital communication or telecommunications systems through, for example 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's 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 and acting with an ethical approach

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.

Qualifications

English and Maths

Apprentices without level 2 English and maths will need to achieve this level prior to taking the End-Point Assessment. 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.

Professional recognition

This standard aligns with the following professional recognition:

- RITTech for 3

Additional details

Occupational Level:

3

Duration (months):

18

Review

this apprenticeship will be reviewed in accordance with our change request policy.

Version log

VERSION	CHANGE DETAIL	EARLIEST START DATE	LATEST START DATE	LATEST END DATE
1.1	End-point assessment plan revised	25/05/2023	Not set	Not set
1.0	Approved for delivery	04/05/2021	24/05/2023	Not set