IfATE
Shaping skills training

IT solutions technician

Key information

- ☑ Proposal approved
- ☑ Occupational standard approved
- ☑ End-point assessment plan approved
- ☑ Funding approved

Reference: ST0505
Level: 3
Typical duration to gateway: 18 months
Typical EPA period: 4 months
Maximum funding: £15000
Route: Digital
Integration: None

Date updated: 27/08/2024
Lars code: 413
EQA provider: Ofqual
Example progression routes:
Software developer,
Software tester,
Network engineer,
Cyber security technologist (2021),
DevOps engineer
Review: this apprenticeship will be reviewed in accordance with our change request policy.

Details of the occupational standard

Occupation summary

Develop, implement, and maintain IT solutions. A solution is a means of solving a problem or a means of improving any existing functionality to gain demonstrable business efficiencies. For the IT Solutions Technician Standard, Solutions will be technical and involve consideration of multiple components and involve interdependencies with other systems. A solution would also seek to determine root cause issues rather than just address symptoms and viable alternatives would always be considered. An understanding of existing infrastructure and the potential impact that solutions can have, is key to this Standard. Appropriate Solutions could involve software, hardware, or a combination to address particular challenges.

This occupation is found in organisations, large and small, in all sectors including public, private, and voluntary organisations. Organisations are increasingly implementing technology to support all functions of business requiring planning and investigation, methodical implementation, and ongoing maintenance to deliver solutions that are suitable, effective and provide value for money.

The broad purpose of an IT Solutions Technician is to develop, implement, and maintain IT solutions. They work as part of a multi-disciplinary team and are required to work across the whole solutions lifecycle including requirements gathering, solutions development, testing, implementation, and ongoing support. The specific tasks undertaken vary depending on what needs to be achieved by the team at any particular time. Some tasks may be very technical, others may be more analytical, business or user focused.

Key to this role will be the need to understand the stakeholders and business needs within the organisation and be confident translating these into designs and solutions. The IT Solutions Technician will apply a structured methodology or framework to gather and analyse requirements. They will liaise with stakeholders and complete in-depth research to support their designs; presenting these to relevant parties in the business and advising how the solution will meet objectives. They will create concept and logical designs of the solutions, evidencing how the objectives can be met.

An IT Solutions Technician will be involved in the development, testing and implementation of designed solutions, including assisting in the management of solutions or projects. As such, they will have a broad understanding of technology areas and the needs of the organisation. This may involve working with other technicians to simplify complex processes and communicating with non-solution stakeholders on the reasons and justification of design choices. IT Solutions Technicians may develop prototype solutions to apply structured testing methodologies. They work within a change management processes during the implementation and are a key member of the problem team. Ongoing maintenance and support will be provided to users and the wider business, ensuring that the solution continues to function as expected and meet business needs.

Typical job titles include:

Junior applications support technician | **Junior database technician**

Junior dev0ps engineer | **Junior it support technician** | **Junior it systems support**

Occupation duties

DUTY	KSBS
Duty 1 Works within a defined role within a solutions development lifecycle.	K1 K6 K9 K21 K23 S1 S2 S3 S5 S10 S13 B1 B2 B6
Duty 2 Apply prioritisation methodologies to manage workload and tasks in order to support timely completion of projects and solutions whilst working within a defined and structured approach.	K2 K3 K5 K6 K11 K17 S1 S2 S3 S4 S5 S10 B1 B2 B3 B6
Duty 3 Apply technical IT knowledge and skills across solution architecture.	K4 K5 K6 K7 K8 K9 K10 K11 K13 K14 K15 S1 S2 S5 B6
Duty 4 Investigate existing systems and apply technical research to support the design of new solutions in order to meet project and business requirements.	K4 K5 K6 K7 K8 K9 K10 K11 S1 S2 S5 B6
Duty 5 Identify a variety of potential solutions to meet requirements, considering economic impacts.	K4 K5 K6 K8 K9 K10 K11 K12 S1 S2 S5 S6 S9 B5 B6
Duty 6 Demonstrate technical contribution to a chosen solution.	K5 K7 K8 K9 K10 K11 K12 K14 S1 S5 S9 S10 B1 B6
Duty 7 Safely implement tested solutions whilst considering sustainability factors.	K8 K10 K13 K18 K19 K20 K21 S1 S4 S7 S10 S13 B5 B6
Duty 8 Communicate with stakeholders throughout the solution process, managing expectations whilst providing an excellent and inclusive service.	K5 K22 S2 S14 B2 B4 B6

Duty 9 Test and manage issues that arise across any stages of the Solutions Life Cycle.	K13 K15 K16 K19 S1 S7 S9 S10 S12 B1 B6
Duty 10 Create, and or maintain, professional documentation to ensure a clear audit trail and progression of issues.	K18 K19 S10 S11 S13 B3 B6
Duty 11 Create test plans and apply a range of testing tools that allow a solution to be thoroughly tested to ensure it is working as expected.	K15 K16 S9 S10 S12 B6
Duty 12 Apply security measures and securely manage data throughout the solution lifecycle, in line with legislation and the organisation's policies and requirements.	K6 K8 K13 K17 K18 K19 K20 S1 S7 S8 S10 S12 S13 B6
Duty 13 Practice guided continuous self-learning to keep up to date with technological developments to enhance relevant skills and take responsibility for own professional development.	K3 K14 K19 K21 S8 S9 S15 B2 B6

KSBs

Knowledge

K1: The stages within a solutions lifecycle.

K2: Stakeholder management techniques and approaches.

K3: Project management approaches and methodologies.

K4: Principles of solution architecture.

K5: Creative and critical thinking principles to aid in solutions suggestions.

K6: The main components within an IT solution including how hardware and or software components may work together.

K7: The main components of a computer system and their purpose.

K8: The purpose of an Operating System OS.

K9: Concepts of cloud, cloud services and cloud storage, including cloud enablement and application e.g. SaaS, PaaS, IaaS.

K10: Different types of network devices and components.

K11: The requirements of systems hosting and access.

K12: Relative merits of different types of configurations for example default and custom.

K13: The data lifecycle including creation, processing and storage, usage archiving and destruction.

K14: Emerging technologies, such as Artificial Intelligence and machine learning, the ethical usage of AI tooling and the potential implication for digital activities and solutions.

K15: Principles of the types of testing, such as functional and non-functional testing, user testing and performance testing, including where testing can be automated where possible.

K16: Significance of test plans.

K17: Principles and importance of change management for example version control.

K18: Organisation and industry legislation, policies and Standards.

K19: Principles of cyber security and the implication on IT solutions.

K20: Fundamentals and application of health and safety legislation and policies.

K21: How their work contributes to Carbon emissions and what steps can be taken to reduce emissions.

K22: Communication techniques: verbal and written.

K23: Principles of cultural awareness and how diversity impacts on solutions.

Skills

S1: Work at any stage of the solution lifecycle.

S2: Interpret client requirements.

S3: Prioritise tasks to work within agreed project plans.

S4: Ensure resources are used efficiently and responsibly.

S5: Design solutions to meet client and business requirements.

S6: Identify technical solutions using creative and critical thinking.

S7: Install hardware or software, either physically or virtually.

S8: Search and use different types of data or information sources.

S9: Test and evaluate performance, functionality, and usability of solutions to ensure compliance with customer and project requirements.

S10: Deploy and implement solutions, supporting change management practices.

S11: Create and maintain documentation in accordance with best practice and organisational requirements.

S12: Support multiple contemporary or legacy solutions to required levels of service.

S13: Apply organisational policies and legislation in relation to security requirements, privacy, and confidentiality.

S14: Communicate using a variety of tools and approaches, adapting language for technical and non-technical stakeholders.

S15: Apply continuous professional development CPD to support their own learning, business needs and technical developments.

Behaviours

B1: Work independently, taking responsibility and initiative as necessary.

B2: Demonstrate standard business courtesies and professional ethics.

B3: Demonstrate a productive and organised approach to their work.

B4: Work with stakeholders whilst contributing to a supportive and inclusive workplace.

B5: Take an environmentally sustainable mindset towards solution design and implementation activities ensuring climate change and the move to net carbon zero is a consideration.

B6: Demonstrate due diligence in all working practices.

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:

- The registration for IT technicians for Associate Member

Version log

Version	Change detail	Earliest start date	Latest start date	Latest end date
Revised version awaiting implementation	Occupational standard, end-point assessment and funding band revised	01/01/2025	Not set	Not set
1.0	Approved for delivery	18/02/2019	31/12/2024	Not set