



Apprenticeship Programme Guide

# AWS CLOUD SUPPORT SPECIALIST

LEVEL 3



## DIGITAL AND DEGREE APPRENTICESHIPS

### Building tech careers in the workplace

We offer digital and degree apprenticeships that focus on the most in-demand tech skills including; cyber, IT, software development, data and digital marketing, along with others in project management and artificial intelligence (AI).

With programme pathways from Level 3 – Level 7, we help learners to progress and grow within your company, helping you retain talent and build capabilities.

Our award-winning approach to blended learning enables apprentices to develop further and faster, adding immediate value to their roles, whilst our interactive portal with real-time dashboards and trigger alerts enable managers to effectively and efficiently track progress.



**Experience:** 30,000 apprenticeships placed



**An unrivalled talent pool:** 100,000 apply to join our programmes every year



**Award-winning:** Recipient of the Gold Award at the Learning Tech Awards 2020 for our apprenticeship delivery model

**98%**

Higher than average provider performance with a pass rate of 98.61%

Based on end point assessments by the BCS 2022

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## QA'S PARTNERSHIP WITH AWS

QA is an official AWS Advanced Training Partner.



QA is the most experienced authorised training provider for AWS in the UK, offering courses and certifications to keep you up to date with all of the latest technologies and developments.



## Gear up and power digital transformation with our AWS apprenticeship programmes

Cloud skills have never been in such high demand – until now. Now's the time to shift your focus to your current tech capabilities and fill your talent gaps with our AWS apprenticeship programmes.

Giving your team members the chance to upskill in AWS Cloud technology, only pushes your organisation closer to success. Our AWS Programmes consist of carefully curated content that is updated frequently – just to keep those cloud skills fresh.

Through our award-winning Digital by Design learner support model, apprenticeships make an impact to businesses from day one – our stats show that 97% of our learners pass their apprenticeship on the first attempt.

An apprenticeship is the perfect way to combine theoretical learning with practical, hands-on experience, all while being paid to train.



Organisations need individuals with cloud skills to help transform their business, and there is a growing demand for IT professionals with AWS Cloud skills. AWS Training and Certification, along with our AWS Training Partners like QA, aims to equip the builders of today and tomorrow with the knowledge they need to leverage the power of the AWS Cloud.

AWS Training, designed by the experts at AWS, teaches in-demand cloud skills and best practices, and helps learners prepare for AWS Certification exams so that they can advance their careers and transform their organisations.

**Maureen Lonergan, Director,  
AWS Training and Certification**





## ROLE PROFILE

### AWS CLOUD SUPPORT SPECIALIST

The AWS Cloud Support Specialist's role is desk based, resolving system user queries and resolving faults in a helpdesk environment. When a cloud based or on-premise system fails the business would contact a Cloud Support Specialist to report the problem and either get it fixed or escalated to an engineer.

The AWS Cloud Support Specialist would be expected to rectify or escalate faults rapidly in order to reduce the impact on the internal or external customer.

#### **AWS Cloud Support Specialists need:**

- Strong technical skills
- A methodical, step-by-step approach to resolving issues
- Business skills like effective communication, teamwork and task/time management
- The adaptability to do a range of work—sometimes complex and non-routine in different environments
- The ability to work under direction, use discretion and determine when to escalate issues

## JOB ROLE SUITABILITY

As an employer it is important to assess whether a candidate (a new hire or existing employee) is working in a suitable job role to successfully complete their programme.

The checklist has been created to help you assess whether your apprentice will be in a position to demonstrate all of the following AWS Cloud Support Specialist's duties during their programme.

### Job roles this programme is a great match for:

- Cloud Technician
- Help Desk Support
- First-Line Support
- Office IT Technician
- IT Support Analyst
- IT Support Officer
- Maintenance Support Technician
- Data Centre Support Technician
- Cyber/Security Support

### Checklist

- |    |   |
|----|---|
| 1  | Will the apprentice be providing technical support to customers both internal and external through a range of communication channels?   |
| 2  | Will they establish and diagnose ICT problems/faults using the required troubleshooting methodology and tools?  |
| 3  | Will they interpret technical specifications relevant to the ICT task?  |
| 4  | Will they apply the appropriate security policies to ICT tasks in line with organisational requirements?  |
| 5  | Will they be undertaking the relevant processes with the relevant tools and technologies to resolve ICT technical issues?   |
| 6  | Will they be communicating 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? |
| 7  | Will they apply appropriate testing methodologies to hardware or software or cabling assets?  |
| 8  | Will they be practising guided continuous self-learning to keep up to date with technological developments to enhance relevant skills and take responsibility for their own professional development?           |
| 9  | Will they be documenting or escalating ICT tasks as appropriate to ensure a clear audit trail and progression of issues?  |
| 10 | Will they be installing and configuring relevant software and hardware as appropriate for example: mobile apps, printers, projectors, scanners and cameras?   |
| 11 | Will they be addressing IT issues by prioritising in response to customer service level agreements?   |
| 12 | Will they administer security access requirements and permissions for stakeholders escalating as necessary for example password resets?   |
| 13 | Will they support the roll out of upgrades or new systems or applications?  |



## ENTRY REQUIREMENTS

### The entry requirements for this programme are as follows:

- 3 GCSEs (or equivalent) at grades 4+ (A-C) in any subject
- GCSE Maths and English (or equivalents) at grades 3+ (D or above)
- Prospective apprentices must not hold an existing qualification at the same or higher level as this apprenticeship in a similar subject

### Experience (if the learner can't meet the qualification requirements):

Those working in the Tech Industry e.g. having 6 months plus of experience working in any IT position or 1 year plus work experience in any other profession or sector and able to demonstrate working towards Level 2 in Maths and English.

## FINDING NEW TALENT

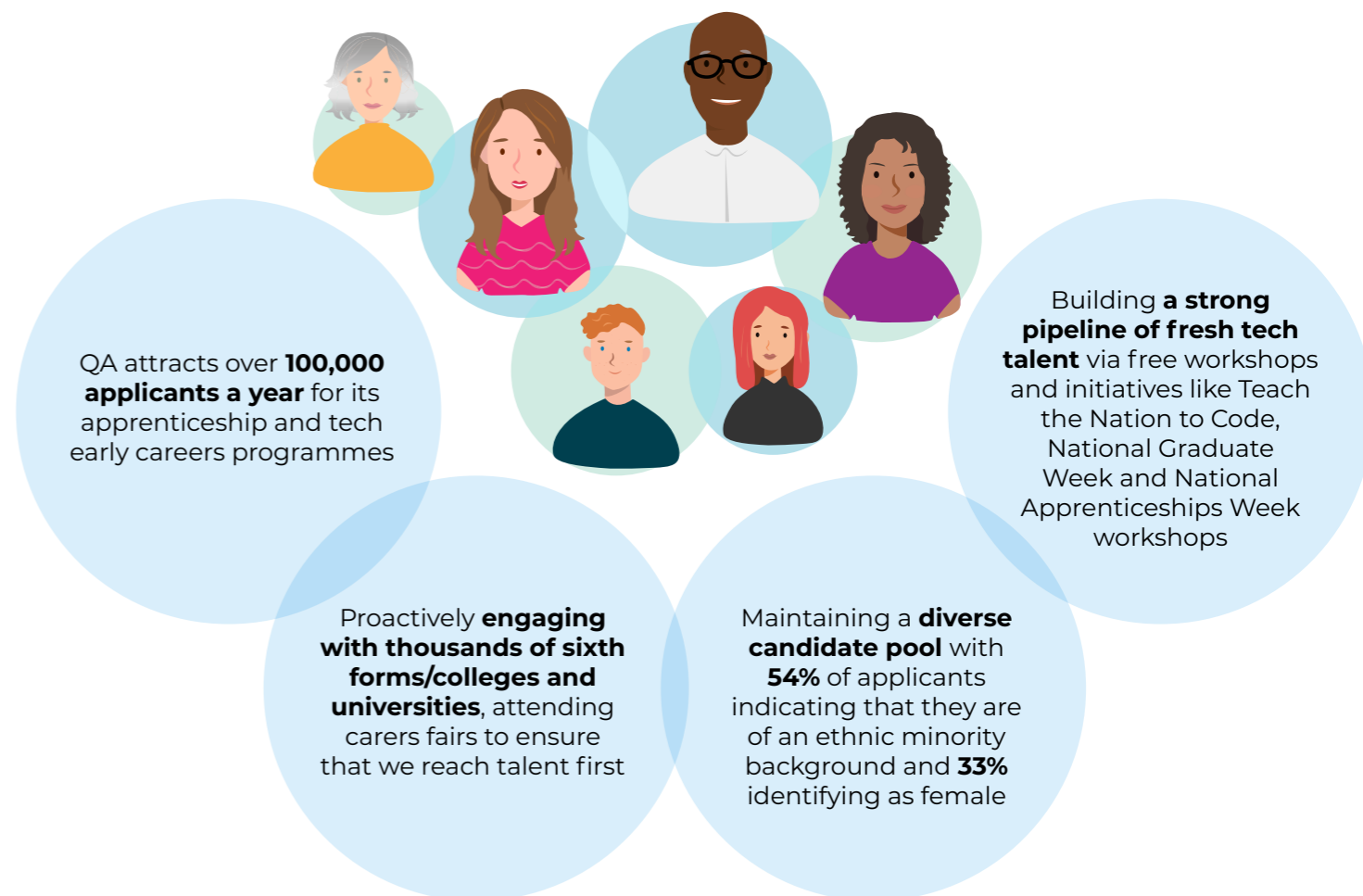
Each year, QA attracts over 100,000 applicants for our early careers opportunities, building a robust pipeline of fresh tech talent.

Our success lies in leveraging a wide array of channels and partnerships that ensure we have a constant flow of applications and access to a diverse range of candidates.

We have strong partnerships in place with educational and career institutions, including local job centres, career networks, youth groups, and universities.

We have a prominent presence on all major job boards in the market, ensuring maximum visibility for our job postings.

Our QA team employs social media campaigns to reach specific profiles in certain regions or demographics.



# DIVERSITY AND INCLUSION

## We're passionate about diversity in tech

It's our mission to help eradicate the gender gap, and make sure equal opportunities are given to applicants from all backgrounds. We do this through our long-standing partnerships, QA-driven initiatives and use of trending tools and software.

### Diversity-first candidate attraction

We've invested in using augmented copy checking tools to ensure language is inclusive, open to all and free from bias.

We use inclusive imagery throughout our campaigns – producing visual content that promotes diversity and inclusion.

### Promoting inclusivity

We nurture relationships with influencers, schools, colleges and universities via events and interactive sessions to ensure learners from all backgrounds are given the same opportunities.

### Diversity partnerships

We forge partnerships with like-minded organisations who share our vision on STEM gender equality including STEM women, Stemettes, Young Professionals and Coding Black Females.

### Initial Assessment

Every candidate goes through an initial assessment where their current knowledge, skills and behaviours are measured and mapped against the apprenticeship standard.

This process is an assessment of the apprentice's eligibility for an apprenticeship programme, and ensures they are placed on the right programme at the right time. This contributes towards a successful completion and a good learner experience.

### We make tech skills accessible to all

We run free tech workshops including 'Teach the Nation to Code' and 'Teach the Nation to Cloud' so anyone can explore technology career opportunities.

# A BLENDED APPROACH TO LEARNING

## How we deliver

QA apprenticeships are designed to immerse the apprentice in their job role while providing time for them to complete the required off-the-job training to become occupationally competent and ready to undertake End-Point Assessment to complete their apprenticeship standard.

QA Apprenticeships also provide more flexibility for the employer, allowing apprentices to learn through a combination of project and lab work, live events, self-research, self-paced learning and peer-to-peer learning.

Full-time apprentices (those that work 30 hours per week or more) will be required to spend at least 20% of the apprentice's normal working hours over the planned duration of the apprenticeship practical period on off-the-job training. This means the minimum requirement for apprentices working 30 hours or more per week is an average of 6 hours of off-the-job training per week (i.e. 20% of 30 hours) over the planned duration.

Employer coaching, shadowing and mentoring remain off-the-job training, however, there will be more defined requirements to guarantee this is directly related to the apprenticeship and will be part of the training plan.



# LEARNER SUPPORT



## Safeguarding at QA

Safeguarding means ensuring the safety and wellbeing of our learners.

At QA, this means ensuring our policies and processes promote and protect learner wellbeing and that while you are on programme, and that while on programme, we teach learners about the types of risk facing modern day British citizens.

This includes cyber risks, mental and physical health information, risks of radicalisation or grooming and much more.

### Ways to access support if you are worried for yourself or someone else:

- Call us – anytime 07808 050273
- Email: [safeguarding@qa.com](mailto:safeguarding@qa.com)
- Contact your Digital Learning Consultant (DLC), tutor or account manager
- Speak to any member of QA staff onsite



## Prevent at QA

Prevent is part of the Government's counter-terrorism strategy.

At QA, this means we teach our staff and learners about the four British values: democracy, rule of law, individual liberty and respect and tolerance.

We also work with Prevent partners to identify people at risk of being or causing terror related harm.

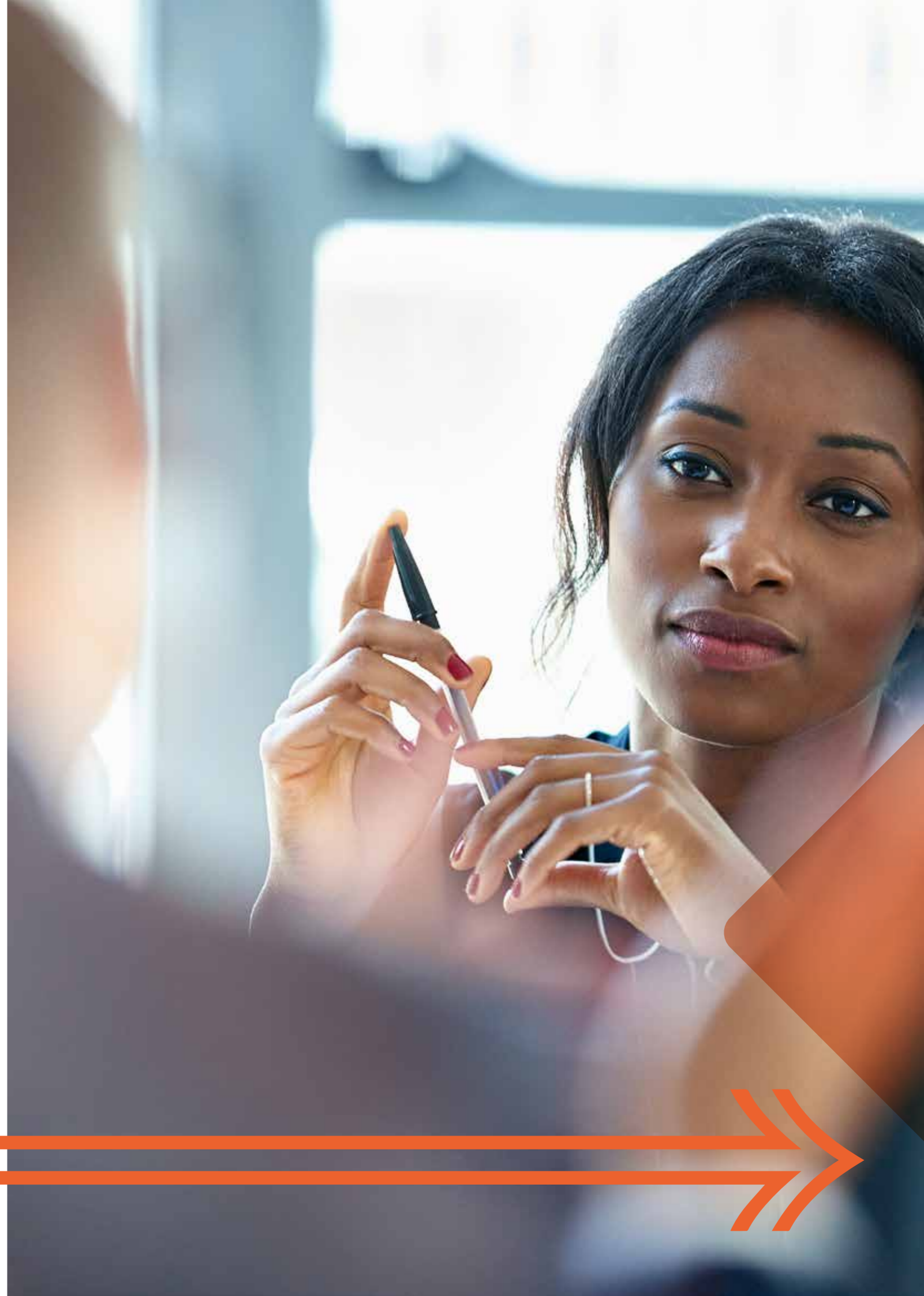


## Mental Health at QA

Emotional and mental wellbeing is an important component of successful learning.

Understanding how to protect mental health and promote emotional wellbeing is part of maintaining positive mental welfare.

We will always actively encourage conversations and make sure information is readily available to both learners and staff with regards to mental wellbeing.

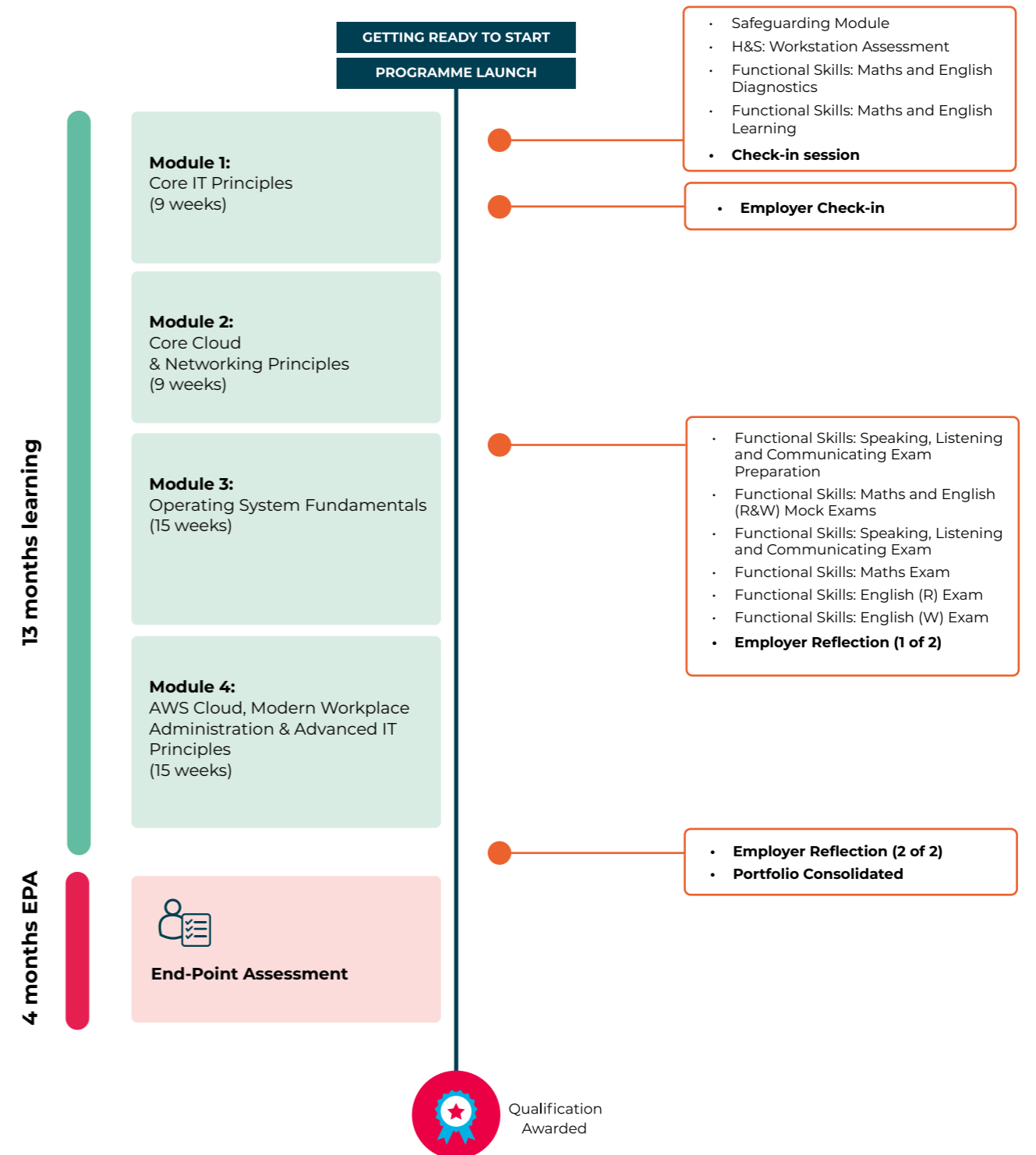






# THE LEARNER'S JOURNEY

**Typical Programme Duration:** 13 months (+ 4 months for End-Point Assessment)



# GETTING STARTED MODULE

The modules in our AWS Cloud Support Specialist apprenticeship equip learners with the advanced technical skills they need for their role. Each module develops the core set of skills they must be able to do well to be competent.

In each module, learners will 'discover', 'practise' and 'apply' what they've learned. This helps them put their newly-found knowledge into action back at work.

There are 4 modules to complete with the following learning outcomes.

## Module 1: Introduction and Core IT Principles

### Programme Launch (Synchronous session online)

- Learn about the programme and structure
- Calendar of apprenticeship events
- Setting expectations
- Complete first networking activity

### Discover. Practise. Apply.

This module introduces learners to the key organisational, cultural and health and safety considerations that are required by Cloud Specialists. We also cover a broad range of foundational networking knowledge and skills.

#### Discovery activities include:

- What is binary?
- How strong is my password?
- Have I been Pwned: Check if your email has been compromised in a data breach
- Diversity and cultural awareness
- Knowledgebase / user guide structure and format
- Introduction to STARRS (Situation, Task, Action, Result, Reflection, Strengthen)
- WEEE legislation introduction (video)
- Introduction to network components - Hub, Switches, Routers, DNS, DHCP, Servers
- Network topologies and access methods - Star, Mesh, Ring, Bus, Logical and physical topologies
- Technical document structure and format

#### Practical activities include:

- Binary game
- Write your introduction
- How we communicate in the workplace (tech vs non-tech)
- Health and safety / organisational compliance
- Numeric conversions (Binary, Decimal and Hexadecimal)
- Introduction to Wi-Fi and how to approach fixing connection problems
- Fix and report using STARRS
- Introduction to virtual network components - VM's, Virtual networks, VPN, Internet, Intranet and Extranet
- Cloud literacy
- Introduction to IPv4 addressing (video)
- Create and format your portfolio and project documents

#### Apply activities include:

Description of their role, their employer and where they fit in the organisation including identifying relevant stakeholders

**Module duration:** 9 weeks **Classroom attendance:** 2 days

# TECHNICAL MODULES

The technical modules focus on the knowledge and skills required of an AWS Cloud Support Technician in detail. After each module learners will 'apply' what they've learned at work on current projects.

## Module 2: Core Cloud & Networking Principles

This module introduces learners to core networking principles including Network Addressing, Cloud, Virtualisation and Security.

### Discovery activities include:

- Approaches to problem solving
- Documenting actions and the benefits of task tracking with ticketing systems
- Maintenance approaches - preventative, predictive, reactive
- Describe backup and recovery options and their benefits
- Describe mobile device security - encryption, strong password, biometric checks, transport encryption

### Practical activities include:

- IPv4 - addressing, subnetting; NAT, static IP, gateway; APIPA; network classes, classful/ classless IP addressing; reserved address ranges for local use (including local loopback ip)
- IPv6 - why use IPv6; addressing; ipv4toipv6 tunnelling protocols to ensure backwards compatibility; dual ip stack; subnetmask; gateway; ports; packets; reserved address ranges for local use (including local loopback ip)
- Names resolution - DNS, resource records, Windows Internet Name Service (WINS), steps in the name resolution process, HOSTS file, LMHOSTS file
- Networking services - Dynamic Host Configuration Protocol (DHCP), Network Address Translation (NAT), firewalls, remote access, VPN
- TCP/IP - tools such as ping; tracert; pathping; Telnet; IPconfig; netstat, reserved address ranges for local use (including local loopback ip); protocols
- Wireless networking - types of wireless networking standards and their characteristics (802.11A, B, G, N, AC including different Ghz ranges), types of network security (for example, WPA/WEP/802.1X ), point-to-point (P2P) wireless, ad hoc networks, wireless bridging
- Fix and report (STARRS)

**Module duration:** 9 weeks **Classroom attendance:** 5 days

## Module 3: Operating System Fundamentals

This module will provide learners with knowledge of fundamental operating system concepts in Windows 10, Linux and cloud-based environments.

### Discovery activities include:

- Understanding operating system configurations
- Installing and upgrading client systems
- Managing applications
- Managing files and folders
- Managing devices
- Understanding operating system maintenance

### Practical activities include:

- Understanding operating system configurations
- Installing and upgrading client systems
- Managing applications
- Managing files and folders
- Managing devices
- Understanding operating system maintenance
- Fix and report (STARRS)

### Apply activities include:

- Scoping solutions informed by the system data
- Test and evaluate system performance
- Carrying out routine maintenance
- Applying necessary security in line with access

**Module duration:** 15 weeks **Classroom attendance:** 5 days



**Module 4:**  
AWS Cloud, Modern Workplace Administration & Advanced IT Principles

This module will provide learners with an extended understanding of cloud enabled systems, secure integration, disaster recovery, principles of test plans and automation tools.

**Discovery activities include:**

- Describe the top-level tasks required to deploy a VPN
- Describe how HTTPS provides secure access to web applications
- Describe how using encryption technologies can securely transport data across mobile or wireless networks.
- Explain how tools can be used to remotely manage devices or provide assistance to remote users.
- Describe mobile device security - encryption, strong password, biometric checks, transport encryption
- Principles of disaster recovery and test plans

**Practical activities include:**

- Linux Command Line Fundamentals
- Introduction to PowerShell
- Focus on project report (STARRS)
- Introduction and History of AWS
- AWS Foundational Services: EC2, VPC, S3, EBS
- AWS Security, Identity, and Access
- Management: IAM
- AWS Databases: RDS, DynamoDB
- AWS Management Tools: Auto Scaling, CloudWatch, Elastic Load Balancing, Trusted Advisor

**Apply activities include:**

- Scoping solutions informed by the system data
- Test and evaluate system performance
- Carrying out routine maintenance
- Applying necessary security in line with access
- Demonstrating basic scripting skills to execute tasks

**Module duration:** 15 weeks **Classroom attendance:** 2 days

**Gateway and End-Point Assessment**  
Consolidation, preparation and assessment (Online)

This final component will get learners ready to go through the 'gateway'.

The apprenticeship gateway is an internal QA process. It will ensure that your learner's work is ready to be assessed by BCS. This exists to increase their chances of success.

At this pre-gateway stage learners will:

- Consolidate and submit their portfolio
- Conduct a mock EPA

In addition to the items above, learners must have successfully completed all the Functional Skills exams (except exempt learners).

Once learners have met all the above criteria, they will go through the gateway. When approved, it takes up to 3 months from gateway to achievement.

During this time, learners will:

- Complete their simulation assessment and questioning
- Complete their interview

**Qualifications earned**



When they achieve this apprenticeship, learners will earn the following qualifications:

- Information Communications Technician Level 3 Apprenticeship

**OPTIONAL QUALIFICATIONS:**

As part of module four in this routeway, apprentices will attend the AWS Cloud Practitioner instructor-led live learning course.

- AWS Certified Cloud Practitioner\*

\*QA will provide free of charge exam vouchers for a first attempt for each of these certifications. Subsequent attempts will be funded by the learner/employer.



# LEARNING OUTCOMES

Apprentices will be assessed on 3 key areas; their ability to convey knowledge, their ability to demonstrate practical skills and their capability of displaying professional workplace behaviour. These will be developed during an apprentice's learning journey, with the goal of displaying all of these competencies during their assessment.

These knowledge, skills and behaviour points ensure rounded development, as the standards provide a greater emphasis on the importance of both technical and soft skills in the workplace.

## 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.

## 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
- 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

## BEHAVIOUR

- 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.

## HOW TO GET READY FOR THE END-POINT ASSESSMENT

We want to deliver memorable learning experiences, whilst developing learners with well-rounded skill sets, ready to meet their professional requirements.

To ensure we are achieving this goal consistently, it is important for learners, digital learning consultants and employers to work together to ensure learners are supported to succeed in their apprenticeship's End-Point Assessment (EPA).

In this section we outline a number of guidelines which intend to provide a framework so that this can be achieved in a consistent way.

**Preparation for the End-Point Assessment starts from day one.**

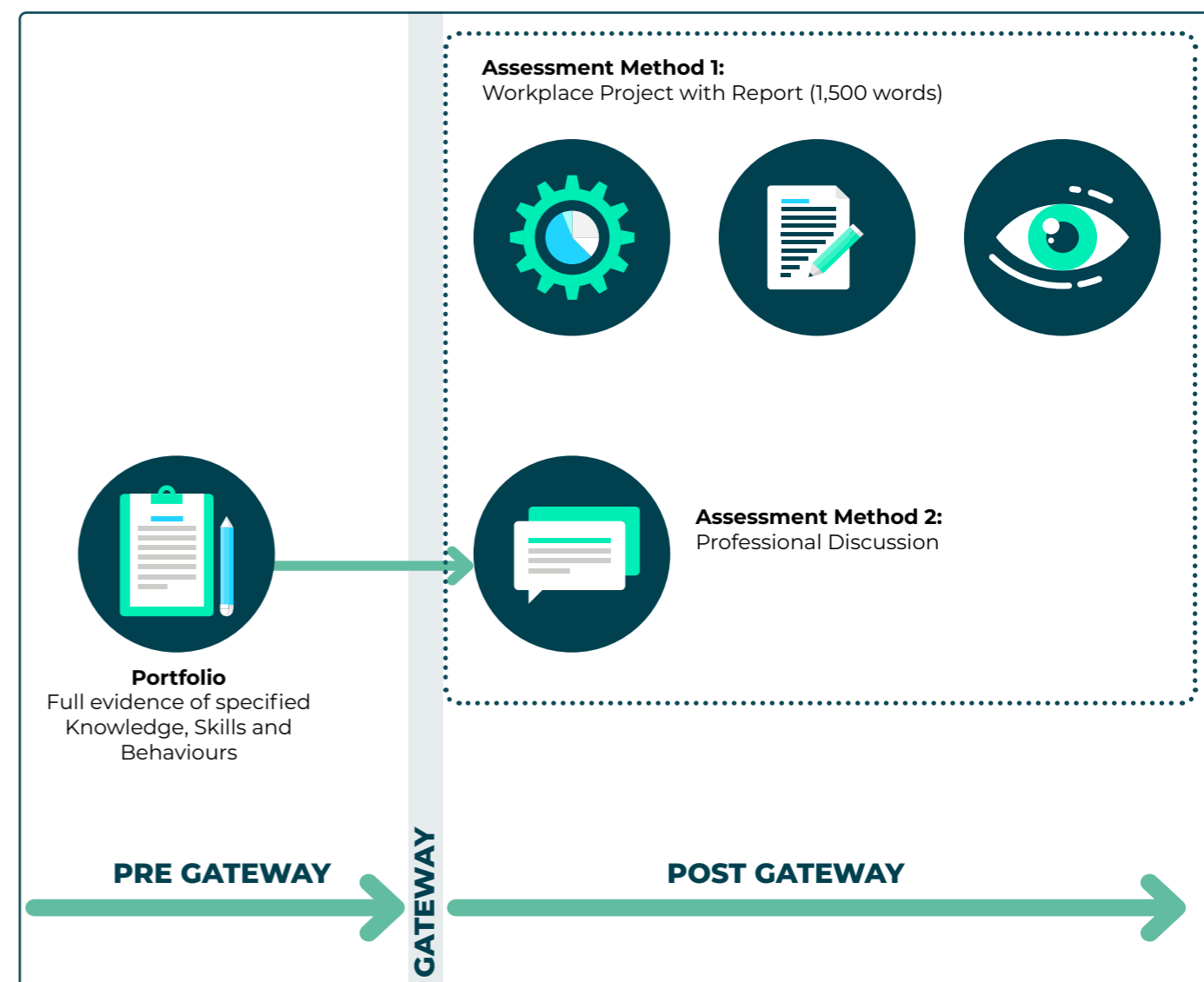
### STAYING ON TRACK THROUGHOUT THE PROGRAMME

Learners and employers should start preparing for EPA from the start of the programme. Employers will need to ensure that learners are given the right opportunities at work to develop and prove the knowledge, skills and behaviours in the standard.

For this reason, it is very important to keep learners, digital learning consultants and employers informed about the programme progress. It is critical to the success of the apprenticeship programme that all of the above work together to ensure that each learning journey is kept on track avoiding further interventions (and time commitment) whenever possible.

To help learners with this, we have created two guiding documents – a programme timeline, and a progress review map – so progress can be checked against it, at any time. Any progress deviations above 15% will be reviewed on a case-by-case basis. This is to ensure the apprenticeship is progressing in a timely manner.

## HOW THE EPA IS GRADED



## WHY STUDY WITH QA?

As one of the UK's leading tech training and talent organisations, QA helps individuals ranging from those at the start of their journey who want to learn the basics of AWS services to seasoned professionals looking to develop and extend professional services competencies, with training and certification to get the most of AWS technologies.

Our experienced team of experts deliver a wide range of hybrid and cloud native courses which means we can offer learners courses in supplementary subjects as such as Agile, Kubernetes, DevOps, Cyber Security and Project Management, helping learners to shape the professional skills required for their chosen career.

As an experienced AWS training partner in the UK, QA trains thousands of AWS professionals each year with phenomenal feedback from our learners. Our learning experts not only collaborate with our technology partners to shape the content we deliver, they are also frequently assessed to ensure we consistently provide the highest standards of training in the market.

### EXPANDING YOUR TECHNICAL SKILLS WITH CLOUD ACADEMY

Our apprentices are given full access to our proprietary Cloud Academy platform for the duration of their programme.

Cloud Academy brings the very latest and up-to-date content to our apprentices through single units, courses and comprehensive learning paths to really build on the core learning outcomes defined within the programme. Furthermore, apprentices are able to prepare for the full suite of vendor qualifications across AWS much more.

Cloud Academy users also benefit from hands-on labs, lab challenges and lab playgrounds providing a safe, sandbox environment in which our learners are able to practise in real time through guided walkthroughs or through their own exploration. [Check out the Training Library on Cloud Academy.](#)

To find out more about our partnership with AWS, visit [www.qa.com/apprenticeships/aws-apprenticeships/](http://www.qa.com/apprenticeships/aws-apprenticeships/)





**FOR MORE  
INFORMATION,  
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