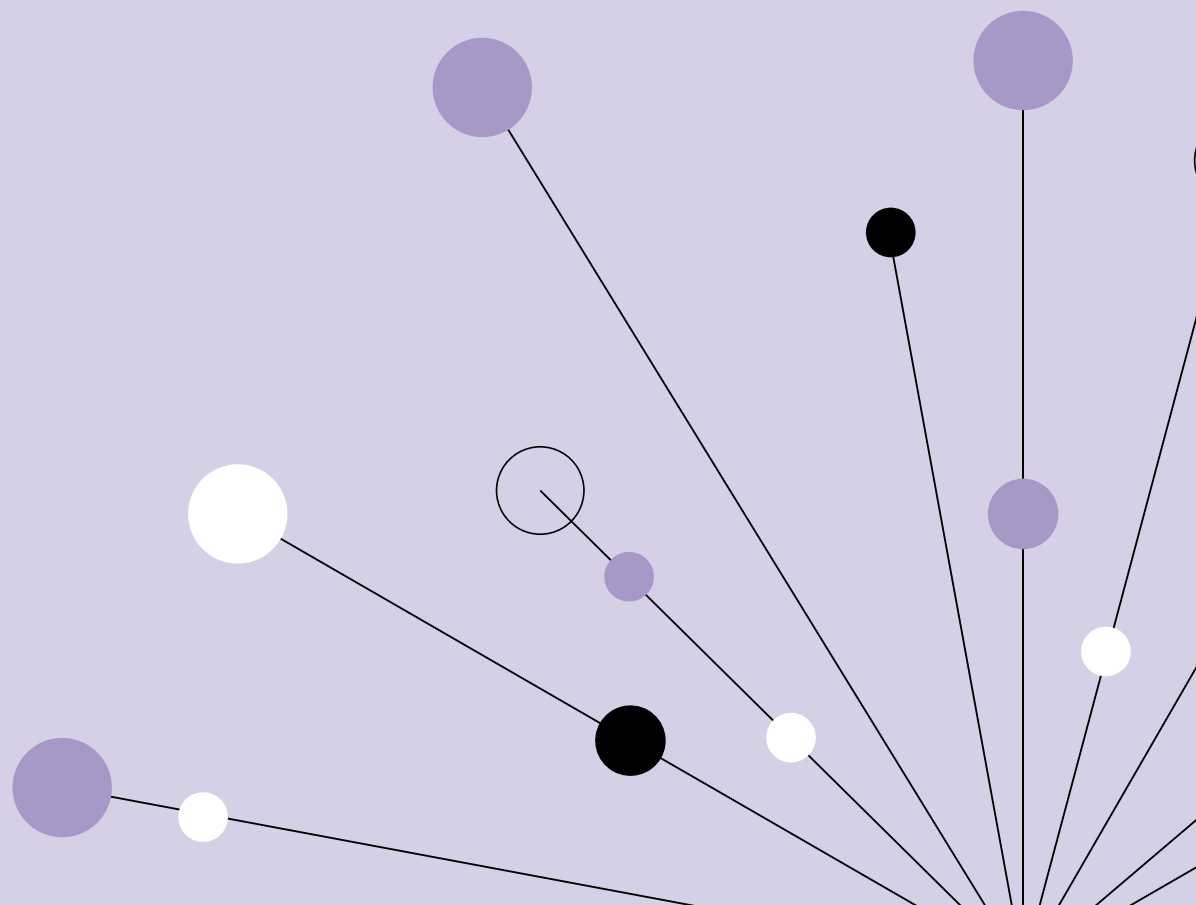


Network Engineer

Level 4 Apprenticeship

Programme Guide





Why QA?

Endorsed by 4,000+ global clients, we are the leader in applied and cohort-based learning academies.

Today's biggest technological shifts are shaped by AI, cloud, and data.

In every technology revolution, there are winners and losers – and teams with applied skills make all the difference. We believe you can't change an organisation unless you change the capabilities of its people and ensure human and machine intelligence work together.

Success in numbers:

35+

Years of training experience

1,000+

AI, cloud & coding hands-on labs

40,000+

Careers launched & accelerated

£500M+

Levy spend invested

24 hours

Feedback time for submissions

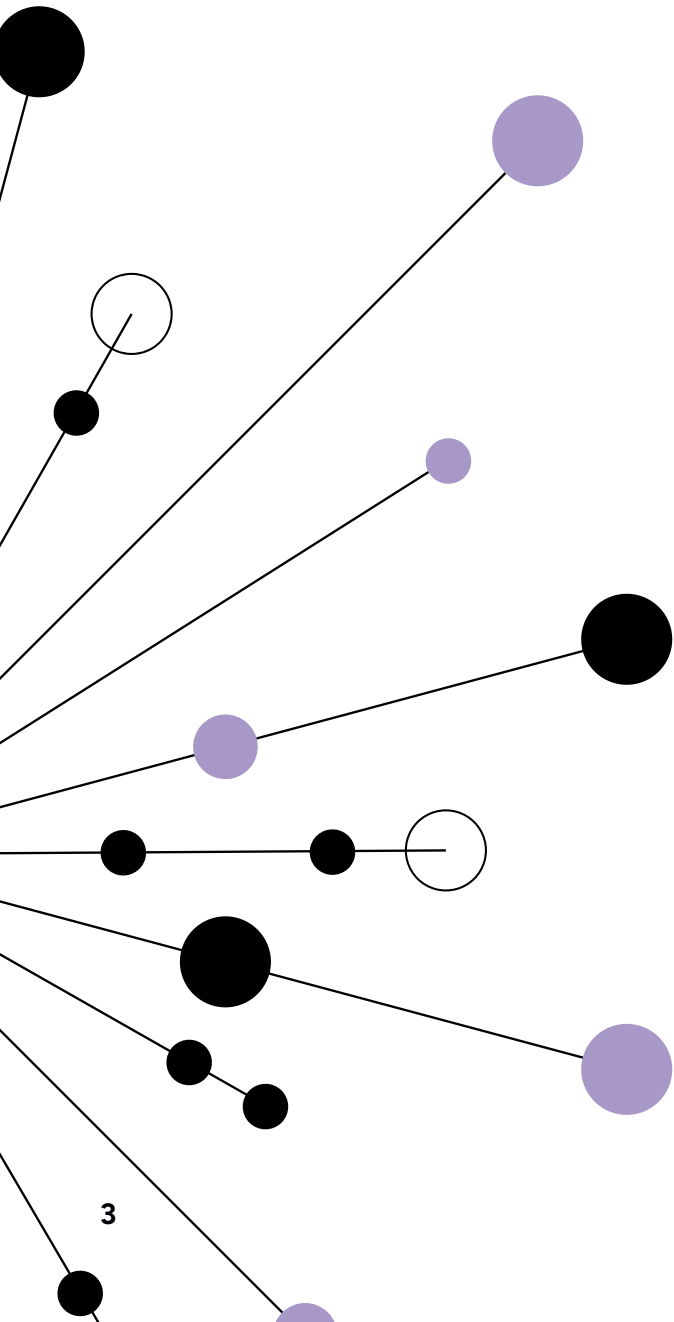
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Response time to learner queries



Ready to explore how QA can support you?

Let's dive in!



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Creating Change

Network engineering drives efficiency with reliable and scalable solutions.

This programme equips your organisation with essential skills to manage physical, virtual, and cloud networks, maximising performance, capacity, and security for seamless access to services.

Our apprenticeships drive business results by empowering organisations to apply skills consistently at speed and scale.



Improve Network Designs

Ensure network infrastructure aligns with business goals and performance needs.



Security and Governance

Address security threats and maintain compliance to protect data and build trust.

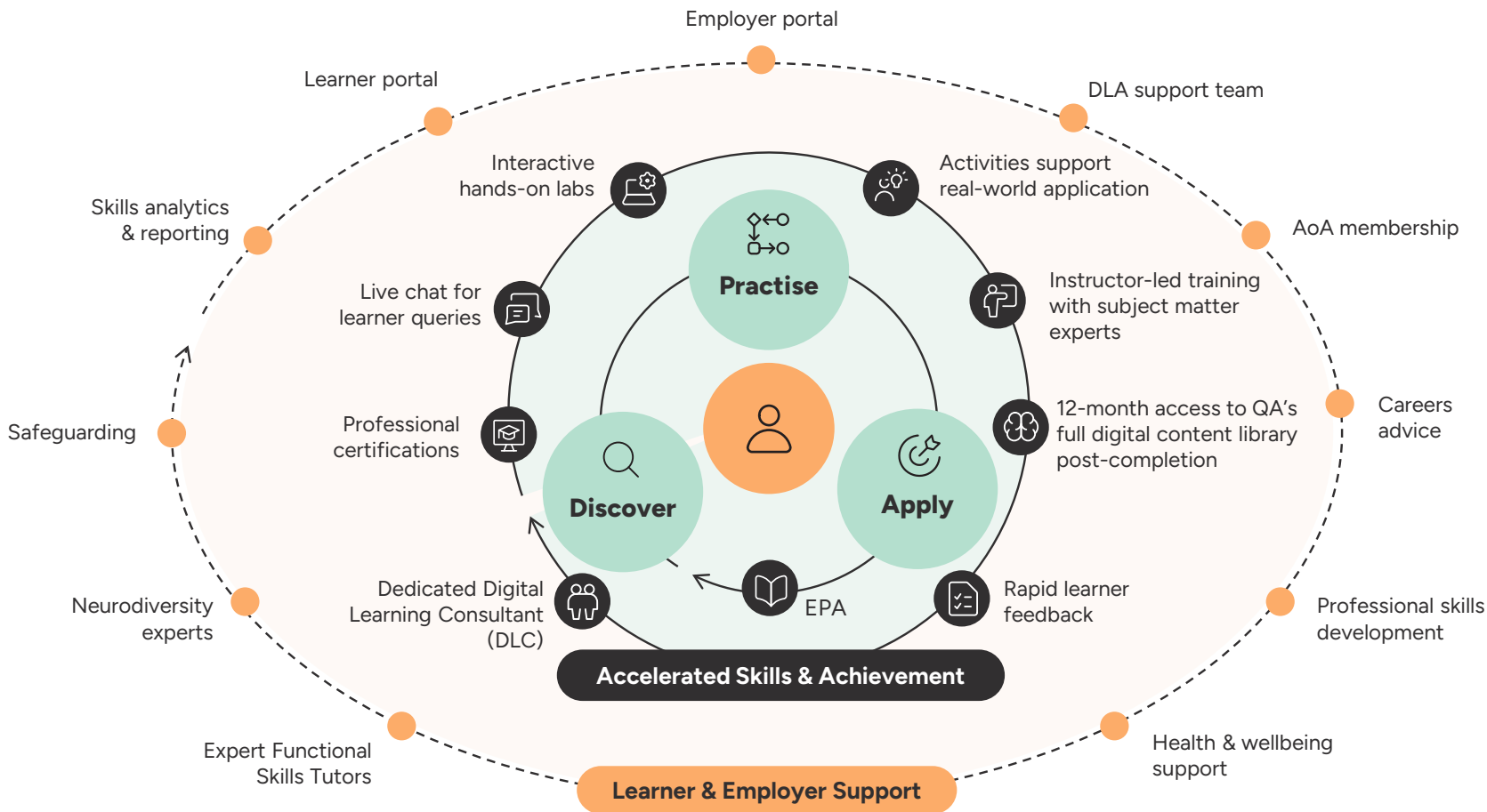


Troubleshooting Processes

Effective troubleshooting and preventive maintenance to minimise downtime and enhance efficiency.

Digital by Design

Our market-leading approach accelerates skill development and achievement through our **Discover, Practise, Apply** methodology, ensuring that both learners and employers are fully supported throughout their programme.



Discover

Leveraging QA's learning platform, learners follow a development path focused on their job role.



Practise

Learners come together for instructor-led training sessions, practising their skills through hands-on labs and sandboxes in a safe environment while collaborating with peers.



Apply

These practiced learnings are applied on the job through work-based activities at key and sequenced stages, fully supported and reviewed by the specialist DLC team.

Programme Overview



Details of standard: [Network Engineer](#)



Total cost: £17,000



Programme duration: 18 months



Live instructor sessions: 15 days

Experience QA's self-paced learning platform with interactive labs and configurable learning.



Network
Fundamentals



Network
Infrastructure



Network
Concepts and
Troubleshooting



Network
Systems and
Architecture



Network
Optimisation

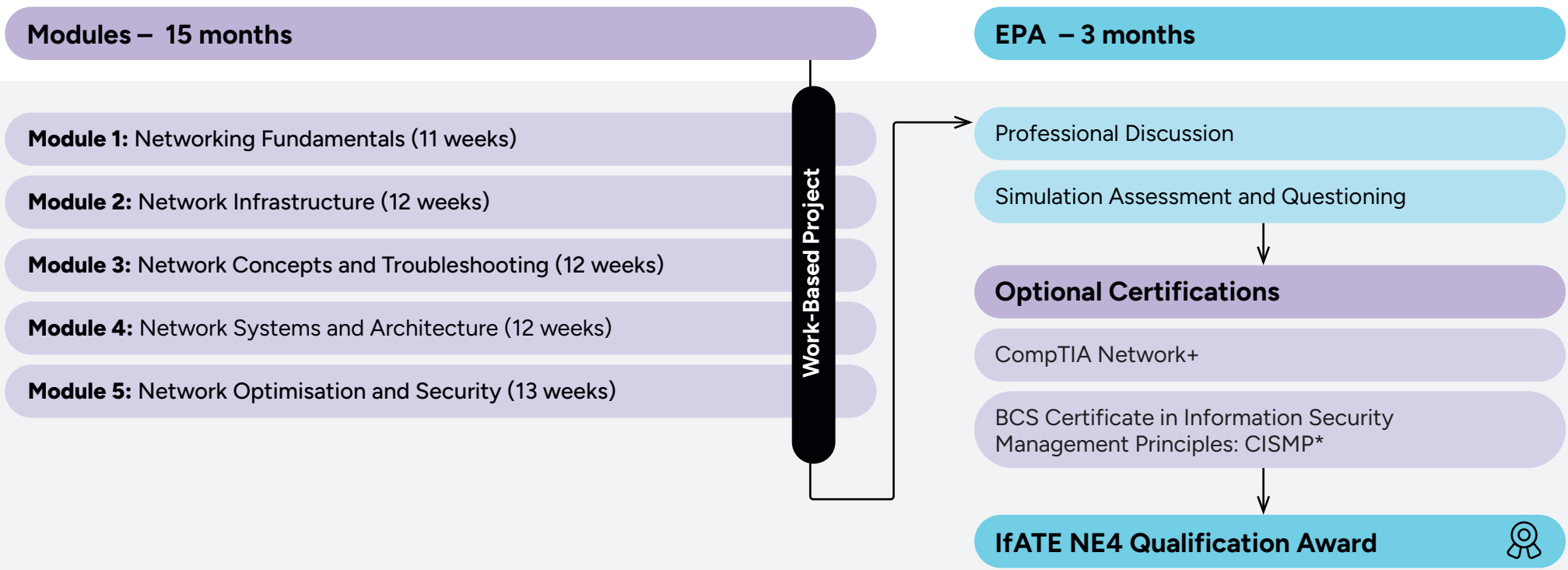


Network
Security

Learner Journey

The Network Engineer programme integrates live and online workshops with self-paced learning, employing a guided discovery approach for individual learner contexts.

Learners are assigned a Digital Learning Consultant (DLC) for personalised coaching and support. These specialists ensure their successful progress, wellbeing, and readiness for assessments.





Modules

Following each module, learners apply their newly acquired knowledge and skills to ongoing work projects.

01

Module 1: Networking Fundamentals

Introduces key concepts, skills, and knowledge that form the backbone of network engineering. Areas covered include binary numeracy, legislation, and technical documentation.

Topics:

- TCP/IP & OSI Models
- IPv4 & IPv6
- Routing Protocols
- Configuring Wired, Wireless & Cloud Networks
- Visualisation with Packet Tracer
- Windows & Linux Networking Tools
- Virtual Machines on Hyper-V
- Networking Legislation & Compliance

Live Instructor Sessions: 0 Days

02

Module 2: Network Infrastructure

Provides networking and server administration skills, offering insights into the intricacies of networking infrastructure.

Topics:

- OSI Model & Data Encapsulation
- VLANs & Switching Technologies
- Access & Trunk Port Configuration
- DHCP & DNS Configuration
- NAT & PAT Configuration
- Routing Protocols: RIPv2
- IP Addressing, Subnetting & VLSM
- Command-Line Interface (CLI)
- Wired & Wireless Network Technologies
- Troubleshooting Network Configurations

Live Instructor Sessions: 5 Days

03

Module 3: Networking Concepts and Troubleshooting

Examines the CompTIA Network+ syllabus, with a focus on networking concepts and troubleshooting techniques.

Topics:

- Virtual Machine Orientation
- Configuring Ethernet & IPv4/IPv6 Networking
- Subnetting & Address Autoconfiguration
- Configuring Routing
- TCP, Port Scanning & Name Resolution
- IP Address Management (IPAM)
- Performance Testing & Monitoring
- NAT Firewall Configuration
- Secure Appliance Admin & Access Channels

Live Instructor Sessions: 5 Days

04

Module 4: Network Systems and Architecture

Delves into the day-to-day management of networks, focusing on network hardware, software, services, and routing protocols.

Topics:

- Server Hardware & Network Systems
- RAID Setup & Server Installation
- Active Directory, DNS & DHCP
- VLANs & Routing Protocols
- Virtual Networks & Peering
- Network Connectivity & VPNs
- Load Balancing & Security
- Backup & Disaster Recovery

Live Instructor Sessions: 5 Days

05

Module 5: Network Optimisation and Security

Explores optimisation and security – focusing on effective steps to prevent, detect, and respond to cyber incidents.

Topics:

- Wireless Security & Optimisation
- Cloud Security & Virtualisation
- Incident Response & Forensics
- Business Continuity Planning
- Network Security Tools
- Automation in Security Operations

Live Instructor Sessions: 0 Days



Tools and Technologies

Network Simulation and Configuration

- Cisco Packet Tracer
- Routing Protocols
- DNS
- DHCP

Storage and Backup

- RAID

Cloud Services

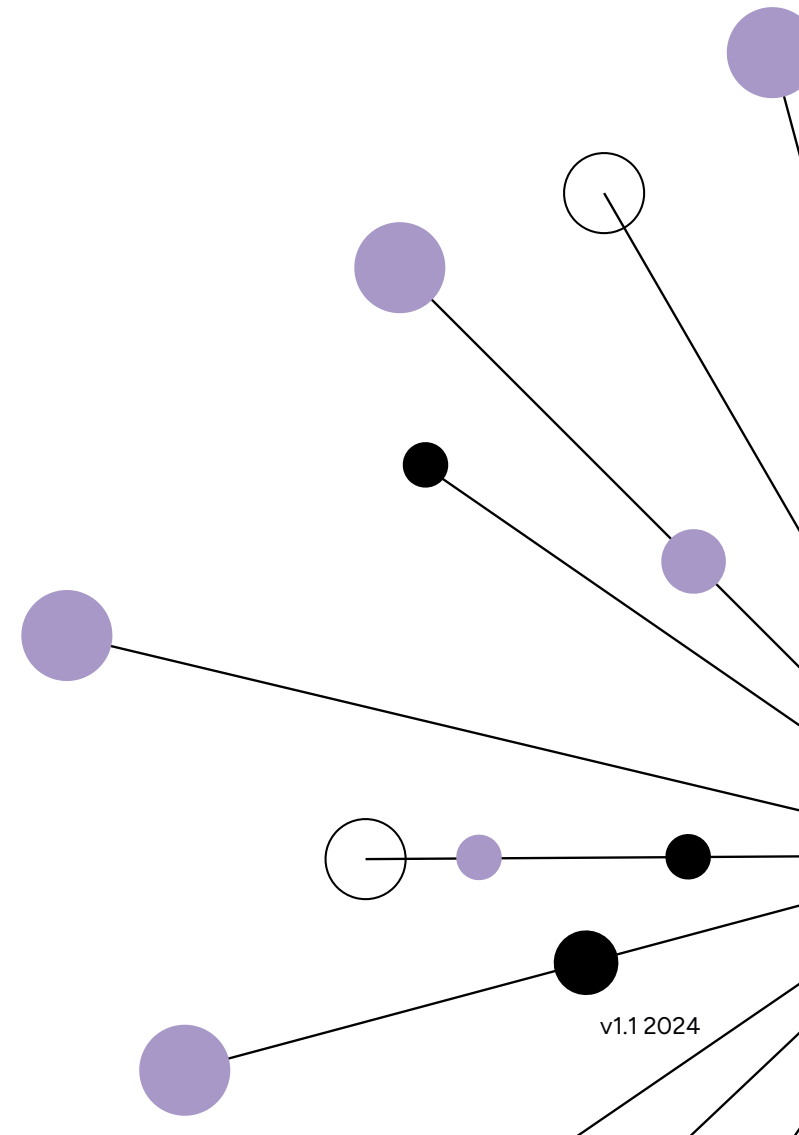
- Azure Monitor
- Azure Network Watcher
- Azure Automation

Operating Systems and Virtualisation

- Windows Networking
- Linux Networking
- Hyper-V

Security and Incident Response

- Network Security
- Cloud Incident Response



End-Point-Assessment

We ensure all learners are fully prepared for their End-Point-Assessment (EPA) through our internal gateway process, maximising their success rates.

Assessment criteria:

01

Knowledge

Ability to convey knowledge effectively.

02

Skills

Demonstrate practical skills with confidence.

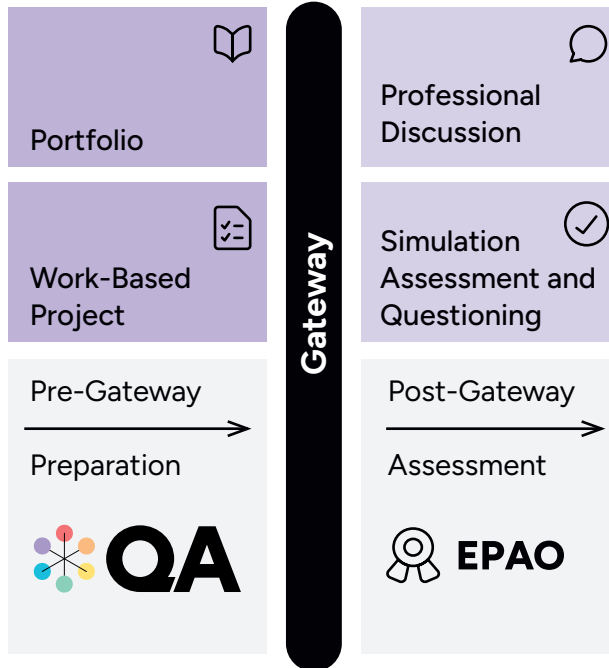
03

Behaviour

Exhibit professional workplace behaviour.

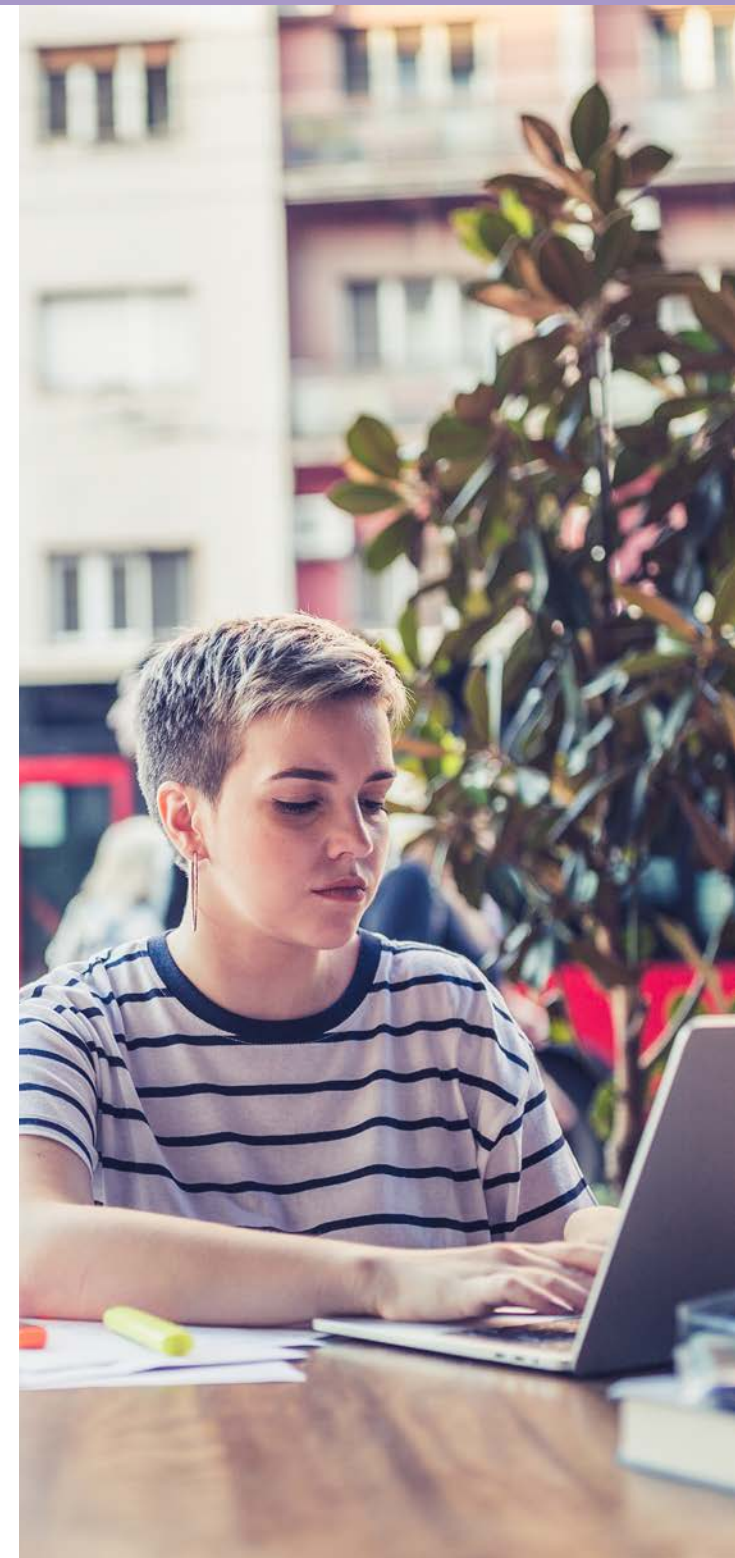
Explore the detailed assessment criteria within the **Network Engineer standard**.

EPA process:



Professional Discussion: Engage in a formal two-way conversation to showcase knowledge, skills, and behaviours.

Simulation Assessment and Questioning: Complete two simulations in a virtual lab focused on network failure and optimisation.



Ready to partner with us?

Let's talk:

 0113 220 7150

 qa.com/contact

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