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| **Competency Standard** | **Minimum, expected, requirements for a pass** |
| 1. Can design simple networks from a well- defined specification and apply appropriate security products and processes | Apprentices can show a solid understanding of networks and are able to use the required techniques, tools, documentation and devices when designing secure networks.  The OSI and TCP/IP Models Types of networks Topologies  Network devices  Media  Network Services  Network addressing schemes  Network planning documentation  Typically this will have a minimum of two servers, at least 30 end point devices, a switch and with protection from known and standard threats. |
| 1. Can install and configure network components, including switches, routers and firewalls | Apprentices can install and configure the elements required to implement a secure network, including  Media  Hardware devices  Software |
| 1. Can optimise the performance of network systems and services | Apprentices can demonstrate how network performance can be optimised and be able to implement techniques to optimise performance as directed. |
| 1. Can monitor, test and adjust network   systems and performance to meet accepted standards using diagnostic tools, analysers and other equipment | Apprentices can demonstrate a minimum of three diagnostic techniques and tools that can be used to interrogate and gather information regarding network performance and evaluate this information to allow network performance to be optimised. |

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|  | Can maintain security and performance of the network against known and standard threats. |
| 1. Can apply diagnostic tools and techniques to identify the causes of network performance issues | Apprentices can show a solid understanding of the techniques and can apply a minimum of three tools to identify network performance issues and apply these to identify performance issues. |
| 1. Can apply structured approaches to troubleshooting network issues and repair faults in hardware, software products and the network | Apprentices can show a minimum of three techniques to gather information and use a minimum of two tools to troubleshoot issues and be able to isolate, repair or escalate faults.  They can communicate solutions and record in line with organisational procedures. |
| 1. Can undertake system upgrades to network hardware, software and operating systems | Apprentices can use a minimum of 3 techniques to upgrade, apply and test hardware and software to at least three different network  configurations ensuring that the network meets the organisation’s requirements and minimises downtime. |
| 1. Can integrate network related software into an existing network environment | Apprentices can demonstrate how to implement the integration of end users software solutions into an existing network environment.  They can develop, implement and communicate these end user plans. |
| 1. Can interpret written requirements and technical specifications for network activities and maintain accurate records of network maintenance activities | Apprentices can receive information from a manager, customer or technical specialist and interpret the information to accurately implement the defined requirements.  They can monitor and identify maintenance requirements and implement required maintenance procedures. They can record accurate data and outcomes of work undertaken. |
| 1. Can log and respond to network service calls and provide technical network support to end users as required | Apprentices can demonstrate high levels of communication, organisational and prioritisation skills when dealing with clients and be able record details relating to an issue, whether face-to-face, remote or in writing. |
| 1. Can document work done in accordance with agreed procedures | Apprentices can show a solid understanding of the organisational procedures dealing with recording of information relating to IT systems and apply them effectively for internal and external customers.  Can record information as specified in organisational polices and SLA |

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| 1. Can operate within the parameters of service level agreements, standards and/or agreed response times. | Apprentices can show a sound understanding of the Service Level Agreements (SLA) and how they impact their role as a network engineer.  They can respond appropriately and in line with agreed timescales. |
| 1. Can operate effectively in the business environment and responds to business issues related to network engineering | Apprentices can show a sound understanding of the factors that impact on a business environment to enable them to carry out their role as a network engineer effectively.  They can work independently and demonstrate how they work securely within the business and recognise when there are factors effecting the network performance, including business needs, downtime, security of data and access controls. |