Assessment Requirements for ICTNWK516 Determine best-fit topology for a local network

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- analyse business or organisational needs
- identify the most appropriate local area network (LAN), virtual private network (VPN) or wireless local area network (WLAN) topology
- document recommendations.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- summarise the typical network topologies for the following:
  - large and small LANs
  - wide area networks (WANs)
  - VPNs
  - virtual local area networks (VLANs)
  - WLANs
- identify and describe the typical components of a local network, including:
  - adaptor cards
  - bridges
  - Ethernet hardware
  - gateways
  - hubs
  - routers
- describe the software and programming requirements of a local network, including:
  - security protocols

- transmission control protocol or internet protocol (TCP/IP)
- describe the business consideration for establishing a local network including:
  - growth projections and capacity planning
  - costs and queuing constraints
  - high and low speed links
  - redundancy paths
  - response time and reliability requirements
  - scope of operation
  - traffic flow patterns
  - traffic load
  - application requirements of users
- outline of installation requirements for local area networks:
  - cabling, particularly unshielded twisted pair (UTP), shielded twisted pair (STP) or optic fibre
  - characteristics and relative strengths and weaknesses of LAN network topologies
  - features and capabilities of current industry accepted hardware and software products
  - features of line sharing protocols.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the network industry, and include access to:

- business requirements
- equipment specifications
- organisational and industry costing.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2