



Australian Government

Assessment Requirements for ICTNWK555

Determine best-fit topologies for local networks

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 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- determine at least three best-fit topologies for local networks.

In the course of the above, the candidate must:

- analyse business and organisational needs
- identify the most viable local area network (LAN), virtual private network (VPN) and wireless local area network (WLAN) topology
- document recommendations and communicate findings to relevant personnel.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

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

- transmission control and internet protocols (TCP/IP)
- business considerations for establishing local networks, 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
- requirements for installing:
 - unshielded twisted pair (UTP)
 - installing shielded twisted pair (STP)
 - optic fibre
 - cables
 - Wi-Fi access points
- features and capabilities of industry-accepted hardware and software products
- functions and features of cost-benefit analyses
- features of line-sharing protocols
- characteristics and relative strengths and weaknesses of LAN network topologies
- organisational requirements regarding:
 - identification of different segments in networks
 - creation of prioritised organisational network functional matrices
 - reporting identified best-fit topologies with personnel
- required legislation, codes, company work practices, regulations and standards, work health and safety (WHS) requirements for scoped work.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

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

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>