



Australian Government

Assessment Requirements for ICTNWK560

Determine best-fit topologies for wide area 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 best-fit topologies for at least three wide area networks

In the course of the above, the candidate must:

- consider budget constraints and organisational needs
- identify the configuration for wireless local area network (WLAN) and the virtual private network (VPN) into a wide area network (WAN)
- document the configuration
- report the configuration 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 networks:
 - large and small LANs
 - WANs
 - VPNs
 - WLANs
- typical components and technologies relevant for a WAN, including:
 - internet protocol (IP) addressing
 - packet switching
 - routed and routable protocols
 - routing protocols, including routing information protocol (RIP), enhanced interior gateway routing protocol (EIGRP) and open shortest path first (OSPF)
 - relationship of asynchronous and synchronous communication

- use of microwave and satellite communication in networking
- transmission control protocols and internet protocols (TCPs/IPs)
- functions and features of cybersecurity and firewalls
- business considerations for establishing a WAN, including:
 - constraints and costs
 - features of networking infrastructure
 - the difference between digital and analogue networks
 - growth projections and capacity planning
 - high and low speed links
 - required WAN protocols
 - redundancy paths
 - response time and reliability requirements
 - scope of operation
 - security
 - traffic flow patterns
 - traffic load
 - users and the applications expected
- organisational requirements policies and procedures, regarding:
 - identification of different segments in networks
 - creation of WAN 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:

- design documents relating to LANs to be incorporated into the WAN
- equipment specifications
- vendor product catalogues and costs.

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>