Australian Government

ICTTEN420 Design, install and configure an internetwork

Release: 1

ICTTEN420 Design, install and configure an internetwork

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to determine customer needs, create appropriate workplace documentation, connect and organise an internetwork according to design specifications, resolving technical problems as they arise.

It applies to individuals who design and install internet protocol (IP) networks including enterprise internetwork technicians, network administrators and network support personnel for large, medium and small office home office (SOHO) enterprises.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Telecommunications – Telecommunications Networks Engineering

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Prepare for design and installation of internetwork	1.1 Prepare for given work according to work health and safety (WHS) and environmental requirements with appropriate personnel
	1.2 Identify safety hazards and implement risk control measures in consultation with appropriate personnel
	1.3 Determine nature and scope of internetwork from job briefs and appropriate personnel
	1.4 Obtain operating instructions, manuals, hardware and software testing methodologies
	1.5 Consult appropriate personnel to ensure the task is coordinated

ELEMENT	PERFORMANCE CRITERIA
	effectively with others involved at the worksite
2. Design enterprise internetwork	2.1 Produce enterprise internetwork topology after considering technical requirements, physical and financial constraints and expansion projections
	2.2 Determine network devices and network resources, according to enterprise procedures
	2.3 Produce internetwork design including network security and router and switch configurations to meet design specifications and enterprise procedures
3. Install and configure designed internetwork	3.1 Install network hardware to network topology design plan according to enterprise procedures
	3.2 Determine network addressing scheme for network connectivity, and verify using calculations
	3.3 Configure routers and switches to perform logical connection of the internetwork
	3.4 Conduct connectivity and performance tests to verify network installation meets design specification
	3.5 Troubleshoot internetwork and internet connectivity according to manufacturer's specifications and enterprise procedures
4. Complete and document network design and installation	4.1 Restore worksite to safe condition according to established safety procedures
	4.2 Record and store essential design and installation information according to enterprise procedures
	4.3 Notify appropriate personnel of completion of the task according to enterprise procedures

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.3, 2.2, 2.3, 3.1, 3.4, 3.5, 4.2, 4.3	• Recognises and interprets legislation, enterprise procedures, manuals and technical specifications to determine job requirements

Writing	2.1, 2.3, 4.2, 4.3	• Uses clear, specific and industry-related terminology to produce network documentation and maintain network records • Writes concisely when communicating with relevant personnel
Oral Communication	1.2, 4.3	• Negotiates with customers and peers to achieve design specifications • Uses listening and questioning skills to confirm understanding for requirements
Numeracy	3.2	• Interprets technical data and performs calculations to verify information
Navigate the world of work	1.1, 1.2, 2.2, 2.3, 3.1, 3.5, 4.1-4.3	• Takes personal responsibility for adherence to legal and regulatory responsibilities relevant to own work, and draws attention to any issues that may affect self or others • Recognises and follows organisational procedures protocols and meets expectations associated with own role
Interact with others	1.3, 1.5	• Collaborates with others to achieve joint outcomes, playing an active role in facilitating effective group interaction
Get the work done	1.4, 2.1, 2.3, 3.1, 3.3-3.5	• Understands key principles and concepts underpinning design and operation of digital systems and tools, and applies these as required including troubleshooting common network problems according to helpdesk procedures • Takes responsibility for planning and organising own workload, identifying ways of sequencing and combining elements for greater efficiency • Implements actions according to a predetermined plan, making adjustments if necessary • Makes decisions quickly and intuitively in familiar situations requiring immediate attention, drawing on past experience to identify key variables and determine the best course of action • Recognises and anticipates an increasing range of unexpected problems, their symptoms and causes, on the basis of safety and specified work outcomes

PwC's Skills for Australia

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTTEN420 Design, install and configure an internetwork	ICTTEN4211A Design, install and configure an internetwork	Updated to meet Standards for Training Packages.	Equivalent unit

Links

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