



Australian Government

ICTNWK405 Build a small wireless local area network

Release: 2

ICTNWK405 Build a small wireless local area network

Modification History

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

Application

This unit describes the skills and knowledge required to build and arrange connectivity to a single zone wireless local area network (WLAN).

It applies to individuals with competent information and communications technology (ICT) skills using one wireless access point or wireless router in a small-to-medium enterprise.

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

Unit Sector

Networking

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Confirm client and equipment requirements	1.1 Identify, clarify and organise client requirements according to network needs and organisational requirements 1.2 Ensure an appropriate person has given the authority for wireless network access 1.3 Evaluate requirements along with business needs, and translate into technical requirements 1.4 Identify components to be installed in order to meet the technical requirements 1.5 Select position for access point, based on user requirements and environmental conditions 1.6 Arrange for preliminary work to be carried out to meet

ELEMENT	PERFORMANCE CRITERIA
	cabling and power requirements
2. Select, install and configure wireless access point	2.1 Select access point device based on current and future client needs 2.2 Install and configure access point to provide wireless access to network 2.3 Configure services 2.4 Test access point and verify wireless connection and security arrangements 2.5 Select, install and configure appropriate wireless card where necessary for legacy equipment
3. Configure network	3.1 Configure security and other key parameters consistent with commercial and business requirements 3.2 Test security and firewall arrangements with appropriate test equipment 3.3 Test the network with user equipment for general compatibility and access
4. Train users	4.1 Determine devices to be connected to the network 4.2 Demonstrate how pairing and log-on arrangements are established to user 4.3 Inform users of wireless network etiquette and traffic capacity issues 4.4 Develop user documentation
5. Monitor and administer wireless network	5.1 Monitor wireless network performance using diagnostic tools 5.2 Debug networking issues to maintain trouble-free wireless connection 5.3 Document current settings and store securely

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
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Reading	1.1, 1.3, 1.5	Recognises and interprets textual information to determine business requirements and all environmental requisites
Writing	4.4, 5.3	Develops material for a specific audience, using clear and detailed language in order to convey explicit information, and keeps a record of relevant setting information
Oral Communication	1.1, 1.2, 4.2, 4.3	- Uses listening and questioning skills to clarify job requirements - Uses appropriate, detailed and clear language to address key personnel and to disseminate information
Navigate the world of work	1.1	Complies with explicit organisational policies and procedures
Get the work done	1.1, 1.3-1.6, 2.1-2.5, 3.1-3.3, 4.1, 5.1-5.3	- Determines job priorities, resources and equipment, and works logically and systematically to undertake clearly defined and familiar tasks - Understands the purposes, specific functions and key features of common digital systems and tools, and operates them effectively to complete routine tasks - Recognises and responds to predictable routine problems related to role in the immediate work context, including connectivity and security issues

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTNWK405 Build a small wireless local area network	ICANWK405A Build a small wireless local area network	Updated to meet Standards for Training Packages Reinstated element 5 to performance criteria	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for ICTNWK405 Build a small wireless local area network

Modification History

Release	Comments
Release 2	Reinstatement of element 'Monitor and administer wireless network' to Elements and Performance Criteria. This version released in ICT Information and Technology Training Package version 3.1
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- develop, implement and maintain wireless networks
- install, configure and test wireless access points
- test security and network to business specifications
- develop user training material
- monitor and resolve wireless network issues.

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:

- outline features of security threats
- summarise the basic principles of network security, including:
 - audit and intrusion detection systems
 - auditing and penetration testing techniques
 - authentication methods
 - network protocols and operating systems
 - security protocols, standards and data encryption
- describe the factors that impact on a small wireless network, including:
 - bandwidth and quality of service
 - factors affecting signal quality

- layer 2 and layer 3 design issues
- features of a small office or home office (SOHO) network
- wireless security strategies
- wireless topologies
- wireless local area network (WLAN) solutions
- outline the protocols and their application for wireless networks, including:
 - transmission control protocol (TCP)
 - internet protocol (IP).

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:

- network technical requirements
- network infrastructure, including wireless hardware and software.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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