



Australian Government

ICTNWK425 Build small wireless local area networks

Release: 1

ICTNWK425 Build small wireless local area networks

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

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 the Information and Communications Technology (ICT) skills involved in building wireless access points or wireless router in a small-to-medium enterprise or similar environments.

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. Prepare to build network	1.1 Identify network needs and organisational requirements 1.2 Determine position for user access point according to environmental and organisational requirements 1.3 Plan schedule of works for preliminary work to be carried out according to organisational and technical requirements

ELEMENT	PERFORMANCE CRITERIA
2. Select, install and configure wireless access point	2.1 Determine access point device according to organisational and technical requirements 2.2 Install and configure access point and services according to organisational requirements 2.3 Test access point and verify wireless connection and security arrangements according to task requirements 2.4 Select, install and configure legacy equipment and wireless card
3. Configure network	3.1 Configure security and other key parameters according to organisational requirements 3.2 Test security and firewall arrangements according to organisational requirements 3.3 Test network general compatibility and access with user equipment
4. Prepare network users	4.1 Determine required network devices according to organisational requirements 4.2 Establish and demonstrate user pairing and log-on arrangements 4.3 Inform users of wireless network etiquette and traffic capacity issues according to organisational policies and procedures 4.4 Develop user documentation and network settings according to organisational and technical standards 4.5 Lodge documentation with required personnel according to organisational policies and procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria

SKILL	DESCRIPTION
Oral communication	• Uses verbal techniques to confirm information and requirements, communicate ideas and gather feedback
Reading	• Interprets textual information from relevant sources to identify software solutions and adherence to organisational security policies and procedures
Writing	• Prepares required documentation conveying explicit recommendations, requirements and information using specific and

SKILL	DESCRIPTION
	relevant language
Planning and organising	• Determines job priorities, resources and equipment, and works logically and systematically to undertake clearly defined and familiar tasks
Problem solving	• Initiates standard procedures when applying solutions in networks, including systems management processes • Deploys rapid solutions to problems involving building wireless local area networks and technical environment
Self-management	• Demonstrates understanding of, and compliance with explicit organisational policies and procedures • Takes responsibility for routine decision making by selecting from a range of predetermined options in routine situations, identifying and taking some situational factors into account
Technology	• Demonstrates an understanding of purposes, specific functions and key features of common digital systems and tools, and operates them effectively to complete routine tasks

Unit Mapping Information

Supersedes and is equivalent to ICTNWK405 Build a small wireless local area network.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for ICTNWK425 Build small wireless local area networks

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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:

- install, configure and test at least two wireless access points
- monitor and resolve wireless network issues on at least two wireless local area networks
- develop and document user training material.

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:

- 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
- 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
- protocols and their application for wireless networks, including:
 - transmission control protocol (TCP)
 - internet protocol (IP).

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:

- site at which a small wireless network can be installed
- tools to install small wireless network
- network technical requirements
- network infrastructure, including wireless hardware and software
- documentation and guidelines that may affect wireless network installations.

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

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