



Australian Government

ICTNWK432 Build an enterprise wireless network

Release: 1

ICTNWK432 Build an enterprise wireless network

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 an enterprise, community or mesh wireless network internally and externally to buildings.

It applies to individuals with task management, interpersonal and Information and Communications Technology (ICT) skills working in senior design roles in the networking area, who are required to develop complex wireless networks for organisations.

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 install network	1.1 Determine network requirements according organisational requirements 1.2 Review existing network design documentation 1.3 Identify network topology according to task requirements 1.4 Identify required networking components according to technical and task requirements 1.5 Determine usability of installation and safety equipment according to technical standards and organisational requirements
2. Install and configure access points	2.1 Determine hardware according to task requirements 2.2 Install and configure wireless access hardware according to

ELEMENT	PERFORMANCE CRITERIA
	task requirements 2.3 Configure security, monitoring, logging and quality of service features and networks 2.4 Calibrate test equipment according to task requirements 2.5 Test wireless network systems performance according to task requirements
3. Install and configure antennas	3.1 Select antennas according to task requirements 3.2 Install and configure wireless network access antennas to technical specification and task requirements 3.3 Measure and assess signal strength according to task requirements 3.4 Resolve and report any radio frequency interference issues to required personnel
4. Finalise network activities	4.1 Seek and respond to network performance feedback according to task requirements 4.2 Review planned maintenance and network performance continuity upgrade requirements 4.3 Document and store network settings and performance continuity recommendations according to organisational procedures 4.4 Store unused ICT equipment according to organisational and industry procedures and guidelines

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
Numeracy	Interprets numerical information to calibrate equipment and measure and assess signal strength
Oral Communication	Uses active listening, observational and questioning techniques to confirm information and using technical language appropriate to audience and environment
Reading	Gathers, interprets and analyses information from a range of sources and identifies relevant and key information
Writing	Prepares required documentation detailing finalised process in a logical manner using cohesive language
Planning and	Uses a combination of formal, logical planning processes to ensure

organising	work is completed according to time constraints and an increasingly intuitive understanding of context to identify relevant information and risks
Self-management	• Demonstrates an understanding of securing information in relation to own work and takes personal responsibility for identifying and managing risk • Initiates standard procedures when solving a broad range of ICT problems • Complies with explicit organisational policies and procedures • Recognises and applies protocols governing what to communicate, with whom and how in a range of different contexts
Technology	• Uses familiar digital systems and tools to access, organise, analyse and store information • 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 ICTNWK417 Build an enterprise wireless 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 ICTNWK432 Build an enterprise wireless network

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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:

- select, install and configure required wireless hardware on at least one occasion
- test, monitor, and administer the installation on at least one occasion
- document finalised process.

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:

- Industry standard wireless local area network (WLAN) and wireless area network (WAN) solutions, including:
 - audit and intrusion detection systems
 - auditing and penetration testing techniques
 - bandwidth and quality of service
 - factors affecting signal quality
 - layer 2 and layer 3 design issues
 - suitability for small office home office (SOHO) and enterprise local area networks (LANs)
 - transmission control protocols or internet protocols (TCPs/IPs) and applications
 - wireless topologies
- common features of security threats and how to develop a security strategy, including:
 - security protocols
 - standards
 - data encryption
- common network protocols and operating systems.

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:

- a site at which design, build and implementation of networking and ICT activities may be carried out
- industry standard ICT equipment
- network infrastructure, including wireless hardware and software
- required regulatory documentation that affects networking activities
- organisational guidelines.

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

Links

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