



Australian Government

ICTNWK546 Manage network security

Release: 1

ICTNWK546 Manage network security

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 implement and manage security functions throughout a network.

It applies to individuals with Information and Communications Technology (ICT) expertise and lead the development of strategic reviews of security and provide technical advice, guidance and leadership in resolution of specified problems.

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. Plan security design process	1.1 Define planning phase for network security design according to organisational requirements 1.2 Define building phase for network security design according to organisational requirements 1.3 Define managing phase for network security design according to organisational requirements
2. Identify threats to network security	2.1 Determine major threat themes to network security 2.2 Determine the potential origin of major threats according to network security design specifications 2.3 Identify industry standard common network vulnerability types 2.4 Design and document threat model according to network

ELEMENT	PERFORMANCE CRITERIA
	security design specifications
3. Analyse security risks	3.1 Determine required elements of risk management according to network security design specifications 3.2 Identify organisational assets requiring protection 3.3 Categorise and document assets and determine their value according to organisational requirements 3.4 Determine and document risk management plan according to organisational requirements
4. Create a security design	4.1 Determine attacker scenarios and threats according to network security design specifications 4.2 Design and document network components security measures 4.3 Develop and document security policies 4.4 Submit document to required personnel and seek and respond to feedback
5. Design security incidents response	5.1 Design and document auditing and incidents response procedure 5.2 Submit to required personnel, seek and respond to feedback

Foundation Skills

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

SKILL	DESCRIPTION
Numeracy	Calculates equipment costs in order to assess their business-related value
Oral communication	Uses active listening, observational and questioning techniques in order to identify different perspectives and confirm and clarify knowledge
Writing	Uses factual information and industry related terminology to develop organisational plans, security policies and document security breaches
Problem solving	- Identifies and applies complex principles, concepts, language and practices associated with the digital world and uses these to troubleshoot and reduce risks - Uses digital tools to access and organise complex data and analyse multiple sources of information for strategic purposes

Unit Mapping Information

Supersedes and is equivalent to ICTNWK511 Manage network security and ICTTEN811 Evaluate and apply network security.

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 ICTNWK546 Manage network security

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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:

- evaluate security information and use it to plan control methods and countermeasures to manage prescribed network security requirements on at least one occasion.

In the course of the above, the candidate must:

- document plans, policies and processes.

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 ICT networks and their configuration
- network attacks, vulnerabilities and related weaknesses of installed infrastructure, including:
 - security technologies
 - emerging security issues
- network security measures, including:
 - auditing and penetration testing techniques
 - logging analysis techniques
 - organisational network infrastructure
 - capabilities of software and hardware solutions
 - general features of emerging security policies, with depth in security procedures
 - network management and security process controls
- network security implementation risk management plans and procedures, including:
 - network security planning
 - implementation

- cost analysis and budgeting.

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 or prototype where network security may be implemented and managed
- network support tools currently used in industry
- organisational security policies, manufacturer recommendations and security standards.

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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