



Australian Government

ICTNWK511 Manage network security

Release: 1

ICTNWK511 Manage network security

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 implement and manage security functions throughout a network.

It applies to individuals with excellent information and communications technology (ICT) expertise who 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. Define a process for designing security	1.1 Define planning phase for network security design 1.2 Define building phase for network security design 1.3 Define managing phase for network security design
2. Identify threats to network security	2.1 Determine why attacks occur 2.2 Determine who the attack may come from 2.3 Analyse common types of network vulnerabilities 2.4 Determine how attacks occur 2.5 Design a threat model to categorise treats

ELEMENT	PERFORMANCE CRITERIA
3. Analyse security risks	3.1 Determine elements of risk management 3.2 Determine assets that require protection 3.3 Categorise assets and calculate their value to the organisation 3.4 Create a risk management plan
4. Create a security design	4.1 Determine attacker scenarios and threats 4.2 Design security measures for network components 4.3 Obtain feedback and adjust if required 4.4 Develop security policies
5. Design and implement responses to security incidents	5.1 Design auditing and incident response procedure 5.2 Document security incidents 5.3 Implement configurations aligned with incident response procedure design 5.4 Test and sign off

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
Writing	2.5, 3.4, 4.2, 4.4, 5.1, 5.2, 5.4	Uses factual information and industry related terminology to develop organisational plans, security policies and document security breaches
Oral Communication	4.3	Uses active listening, observational and questioning techniques in order to identify different perspectives and confirm and clarify understanding
Numeracy	3.3	Calculates equipment costs in order to assess their business related value
Get the work done	1.1-1.3, 2.1-2.4, 3.1-3.3, 4.1, 4.2, 5.3, 5.4	- Demonstrates a sophisticated understanding of 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 • Is acutely aware of the importance of understanding, monitoring and controlling access to digitally stored and transmitted information • Uses a combination of formal and logical planning processes and an increasingly intuitive understanding of context to plan control methods for managing system security • Makes a range of critical decisions in relatively complex situations, taking a range of constraints into account • Recognises and addresses complex problems, including systems processes and rapid deployment of solutions to problems involving failure and security incidents
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTNWK511 Manage network security	ICANWK511A Manage network security	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>

Assessment Requirements for ICTNWK511 Manage network security

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Performance Evidence

Evidence of the ability to:

- identify threats to security
- develop risk management plan
- design network security policies
- analyse and plan solutions to compromised networks and design incident response
- evaluate security information and use it to plan suitable control methods and countermeasures
- add network controls, according to system security policies, procedures and risk management plan.

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:

- recognise and describe common ICT networks and their configuration
- identify and describe network attacks, vulnerabilities and related weaknesses of installed infrastructure, including:
 - security technologies
 - emerging security issues
- identify and describe 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

- explain network security implementation risk management plans and procedures, including:
 - network security planning
 - implementation
 - cost analysis and budgeting.

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:

- 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 must satisfy NVR/AQTF assessor requirements.

Links

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