



Australian Government

ICTNWK416 Build security into virtual private networks

Release: 1

ICTNWK416 Build security into virtual private networks

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 security into a virtual private network (VPN).

It applies to individuals with competent information and communications technology (ICT) skills and who are working in the network area and are required to ensure that VPNs contain required security.

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. Configure router to provide for network security monitoring and management	1.1 Create and apply audit rules consistent with policies, standards, protocols and management systems 1.2 Configure router to provide appropriate level of asset security and monitoring of security consistent with commercial and business requirements 1.3 Monitor and manage system to assess the level of security and attempts to breach security of framework components 1.4 Employ appropriate hardware and software to monitor and address security issues and provide VPN solutions
2. Secure a site-to-site	2.1 Configure internet key exchange (IKE) and internet

ELEMENT	PERFORMANCE CRITERIA
VPN	protocol security (IPSec) 2.2 Configure site-to-site IPSec VPN using pre-shared keys 2.3 Configure site-to-site IPSec VPN using digital certificates
3. Secure a remote access VPN	3.1 Configure a VPN server 3.2 Install and administer a router management console 3.3 Develop documentation on current system settings and framework components, and file securely for future reference

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
Reading	1.1	Gathers, interprets and analyses current industry rules from a range of sources and identifies relevant and key information
Writing	1.1, 3.3	Prepares workplace documentation that incorporates an evaluation of information and specialised and cohesive language in a format and style appropriate to a specific audience
Navigate the world of work	1.1	Recognises and follows explicit and implicit protocols, and meets expectations associated with own role
Get the work done	1.2-1.4, 2.1-2.3, 3.1-3.3	- Uses a combination of formal, logical planning processes and an increasingly intuitive understanding of context to identify relevant information and risks - Understands the importance of secure information in relation to own work and takes personal responsibility for identifying and managing risk - Understands the purposes, specific functions and key features of common digital systems and tools, and operates them effectively to complete routine tasks - Initiates standard procedures when responding to familiar problems within the immediate context

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTNWK416 Build security into virtual private networks	ICANWK416A Build security into virtual private networks	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 ICTNWK416 Build security into virtual private networks

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Performance Evidence

Evidence of the ability to:

- configure a router to provide the required security
- implement and maintain security functionality for a virtual private network (VPN), including:
 - site to site VPN
 - remote access VPN
- produce security documentation.

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 the characteristics of a VPN system, including:
 - site to site
 - remote access systems
 - network protocols and operating systems relevant to VPN, including its features, issues and functions
- describe the security requirements for a VPN, including:
 - auditing and penetration testing techniques
 - configuration of routers and switches
 - security protocols, standards and data encryption
 - processes and techniques related to security perimeters and their functions
 - security threats, including eavesdropping, data interception, data corruption and data falsification

- transmission control protocol or internet protocol (TCP/IP) protocols and applications audit and intrusion detection systems
- authentication issues
- recognise and describe the differences between common networks, including:
 - local area network (LAN)
 - wireless local area network (WLAN)
 - wide area networks (WAN)
- identify and describe organisational issues surrounding:
 - security cryptography
 - screened subnets
 - virus detection software.

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 servers and security hardware and software.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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