



Australian Government

ICTNWK402 Install and configure virtual machines for sustainable ICT

Release: 1

ICTNWK402 Install and configure virtual machines for sustainable ICT

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 develop and implement virtualisation technologies with the goal of providing a more sustainable information and communications technology (ICT) environment.

It applies to individuals who work in the network area of organisations and are responsible for the use of virtual machines to increase sustainability.

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. Identify virtualisation benefits and features	1.1 Research and determine government and industry guidelines and policies for use of desktop and server virtualisation 1.2 Identify benefits of virtualisation of desktop and server environments 1.3 Identify available features of current virtualisation software 1.4 Select virtualisation solution based on current and future needs of the client
2. Install and configure virtualisation software	2.1 Identify, clarify and organise requirements of the client relating to virtualisation technologies, following organisational

ELEMENT	PERFORMANCE CRITERIA
	requirements 2.2 Identify hardware, software and infrastructure components required to be installed and configured to meet technical requirements 2.3 Install and configure software to provide support for virtualisation of desktop and server operating systems 2.4 Configure virtualisation software application features to accommodate required functionality, relating to client and business needs
3. Install and configure virtual machines	3.1 Install virtual machine consistent with client, commercial and business requirements 3.2 Configure virtual machine consistent with client, commercial and business requirements 3.3 Test functionality of installed virtual machine
4. Configure virtual networks of virtual machines	4.1 Configure internet protocol (IP) addressing to match chosen network configuration 4.2 Configure virtual network as host only configuration 4.3 Configure virtual network as bridged configuration 4.4 Configure virtual network as network address translation (NAT) configuration 4.5 Configure services to operate under current network configuration 4.6 Test functionality of virtual network configuration
5. Back up and restore virtual machines	5.1 Back up virtual machine state on shutdown 5.2 Restore state on start-up of virtual machine 5.3 Back up virtual hard drive and software configuration files 5.4 Restore virtual hard drive and software configuration files

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, 2.1, 3.1, 3.2	Recognises and interprets industry and government guidelines and organisational policy to determine job requirements
Oral Communication	1.4, 2.1	Elicits information and client business needs by using listening and questioning techniques
Navigate the world of work	2.1	Complies with explicit organisational policies and procedures
Get the work done	1.2-1.4, 2.1, 2.3, 2.4, 3.1-3.3, 4.1-4.6, 5.1-5.4	- Determines job priorities, resources and equipment, and works logically and systematically to undertake clearly defined and familiar tasks - 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 - Initiates standard procedures when adapting configuration procedures, depending on differing operational contingencies, risk situations and environments - Understands key principles and concepts underpinning the design and operation of digital systems and tools, and applies these when troubleshooting existing technology and when seeking to understand the potential impact of new technology - In familiar contexts, responds promptly and intuitively to problems involving virtualised machine environments requiring immediate attention

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTNWK402 Install and configure virtual machines for sustainable ICT	ICANWK402A Install and configure virtual machines for sustainable ICT	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 ICTNWK402 Install and configure virtual machines for sustainable ICT

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Performance Evidence

Evidence of the ability to:

- apply sustainability practices related to current information and communications technology (ICT) network design
- research, identify and develop a virtual machine environment
- implement and maintain a virtual machine environment.

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:

- summarise the current government and industry policies and guidelines related to developing sustainable ICT environments
- identify and describe current technologies and processes designed to produce a sustainable ICT environment
- state the available tools and software applications required to manage virtual machines
- define the structure, function and business organisation of client
- outline the configuration of software applications required to manage virtual machines
- describe the configuration requirements required to integrate virtual machines into an existing network design.

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 virtual machine environments may be implemented
- network technical requirements

- software tools to support implementation of virtual machines.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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