



Australian Government

ICTNWK420 Install and configure virtual machines

Release: 1

ICTNWK420 Install and configure virtual machines

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 4.0.

Application

This unit describes the skills and knowledge required to select and implement virtualisation solutions to meet organisational needs in an information and communications technology (ICT) environment.

It applies to individuals who work in the network area of organisations and are responsible for the virtualisation of desktop and server operating systems.

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 options and select virtualisation solution	1.1 Research and determine government and industry guidelines and policies for use of desktop and server virtualisation 1.2 Determine and document current and future requirements of organisations based on guidelines, policies and organisational structure 1.3 Identify benefits and detriments of virtualisation of desktop and server environments relevant to needs of organisation 1.4 Identify available features of current virtualisation software relevant to needs of organisation 1.5 Select virtualisation solutions based on current and future needs of organisation

	1.6 Seek and obtain feedback on selected virtualisation solution from organisation and incorporate feedback into selected virtualisation solutions
2. Prepare for, install and configure virtualisation technology	2.1 Identify, clarify and document technical requirements of organisation relating to virtualisation technologies including virtual machines, virtual networks, and virtualisation software 2.2 Identify and document hardware, software, network, and infrastructure components required to be installed and configured to meet technical requirements 2.3 Seek and obtain feedback on technical requirements and documented components from organisation and incorporate feedback into technical requirements and documented components 2.4 Install and configure software to provide support for virtualisation of desktop and server operating systems according to technical requirements 2.5 Configure virtualisation software application features to accommodate required functionality according to organisational needs
3. Install, configure and test virtual machines	3.1 Install and configure virtual machines according to technical requirements 3.2 Install and configure virtual networks according to technical requirements 3.3 Test functionality of installed virtual machines and virtual networks against technical requirements and rectify errors

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
Reading	Recognises and interprets industry and government guidelines to determine organisational requirements
Oral Communication	Elicits information and organisational needs by using listening and questioning techniques
Navigate the world of work	Complies with explicit organisational policies and procedures
Get the work	Determines job priorities, resources and equipment, and works

done	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
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTNWK420 Install and configure virtual machines	ICTNWK402 Install and configure virtual machines for sustainable IT	Edits to elements and assessment requirements to clarify intent. Typographical edit to title to clarify intent of unit.	Equivalent unit

Links

Companion Volume Implementation Guides are available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTNWK420 Install and configure virtual machines

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements and performance criteria of this unit; including evidence of the ability to:

- Identify one virtualisation solution for the organisation including the identification of applicable guidelines or policies, benefits and detriments and currently available software
- Interpret organisational needs to determine technical requirements of virtualisation solution once
- Install and configure virtualisation software to accommodate organisational needs once
- Install, configure, and test the functionality of two virtual machines, including evidence of the ability to:
 - backup virtual machine state on shutdown
 - restore virtual machine state on start up
 - backup and restore a virtual hard drive and software configuration files for virtual machine
- Configure and test the functionality of a virtual network for the two virtual machines, including the ability to:
 - configure internet protocol (IP) addresses to match selected network configuration
 - configure virtual network as host only, bridged, and network address translation (NAT) configurations
 - configure services to operate under current network configuration

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements and performance criteria of this unit. This includes:

- Government and industry policies and guidelines related to virtualisation
- Technologies and processes relating to virtualisation
- Tools and software applications for virtual machine management
- Configuration of software applications required to manage virtual machines

- Configuration requirements for the integration of virtual machines into an existing network design

Assessment Conditions

Skills must be demonstrated in a workplace or simulated environment where conditions are typical of those in an ICT working environment or ICT workplace. This includes:

- Site or prototype where virtual machine environments are to be implemented
- Information relating to organisational policies and procedures and structures
- Current and future user needs relating to desktop and server environments
- Network technical requirements
- Networked computers
- Individual user to clarify and confirm requirements
- Software to support implementation of virtual machines.

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

Links

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