



Australian Government

ICTSUS501 Implement server virtualisation for a sustainable ICT system

Release: 1

ICTSUS501 Implement server virtualisation for a sustainable ICT system

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to install and integrate a virtual server in a network to replace multiple physical servers, reducing power requirements of individual servers and meeting sustainability targets.

It applies to individuals with a high level of specialist technical skills and knowledge in telecommunications and information and communications technology (ICT) networks using internet protocol (IP) systems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Telecommunications – sustainability

Elements and Performance Criteria

Elements	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 to implement server virtualisation	1.1 Assess extent of virtualisation to be implemented using feasibility report and organisational guidelines 1.2 Analyse existing server infrastructure use 1.3 Research and analyse alternative virtualisation scenarios, including risk analysis and relative comparisons of each consideration 1.4 Provide brief report to appropriate person of proposed preferred plan and describe resources required

	1.5 Liaise with appropriate person to obtain approval for plans with any recommendations
2. Design virtual server specification	2.1 Confirm network operating system, server applications and server design with client 2.2 Determine product and vendor architecture and equipment specifications 2.3 Determine technology and resources within business requirements and budget
3. Install virtual server	3.1 Follow work health and safety (WHS) and environmental requirements according to plan and manufacturer's specifications 3.2 Notify client for site access 3.3 Create detailed task list specifying stages and sequence of work required 3.4 Review hardware and software to ensure compatibility 3.5 Install required operating system, additional tools or third party software as specified in design 3.6 Patch operating system and applications to ensure maximum security and reliability
4. Integrate and test virtual server	4.1 Determine tests to ensure virtual server integration 4.2 Develop test plan, referring to resources and network impact 4.3 Run system tests according to test plan and record outcomes 4.4 Analyse error report and make changes as required 4.5 Test required changes or additions 4.6 Validate changes or additions against specifications
5. Complete work and document activities	5.1 Document installation and integration process according to organisational guidelines 5.2 Provide user documentation 5.3 Notify client and obtain 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
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Reading	1.1, 1.3, 3.5, 4.3, 4.6, 5.1	Identifies, analyses and evaluates technical installation manuals and other text to determine regulatory and technical requirements
Writing	1.4, 1.5, 2.1, 3.2, 3.3, 4.2, 4.3, 5.1-5.3	Prepares reports and design solutions in required formats for diverse audiences that convey an understanding of outcomes and alternatives, and uses terminology appropriate to present to relevant personnel
Oral Communication	1.5, 2.1, 3.2, 5.3	- Articulates clearly using specific language suitable for technical, operational and business audiences to convey requirements - Uses listening and questioning techniques to confirm understanding
Numeracy	2.3	Calculates equipment costs with reference to budgetary constraints
Navigate the world of work	1.1, 3.1	Recognises and responds to both explicit and implicit organisational procedures and protocols, and legislative and regulatory requirements, with specific reference to safety
Interact with others	5.3	Selects the appropriate form, channel and mode of communication for a specific purpose relevant to own role
Get the work done	1.1-1.3, 2.2, 2.3, 3.3-3.6, 4.1-4.6	- Develops plans to manage relatively complex, non-routine tasks with an awareness of how they may contribute to longer term operational and strategic goals - Takes responsibility for own workload, negotiating some key aspects with others - Systematically gathers and analyses all relevant information and evaluates options to make informed decisions - 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 of new technology - Uses analytical processes to decide on a course of action, establishing criteria for deciding between options

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTSUS501 Implement server virtualisation for a sustainable ICT system	ICTSUS5187A Implement server virtualisation for a sustainable ICT system	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 ICTSUS501 Implement server virtualisation for a sustainable ICT system

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Performance Evidence

Evidence of the ability to:

- communicate with clients for business purposes
- determine and meet client requirements for installation and testing a virtual server
- install, integrate and test virtualisation components according to vendor and technical specifications.

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:

- explain client business domain, business function and organisation
- summarise compatibility issues and resolution procedures
- describe configuration of internet protocol (IP) networks
- identify current industry-accepted products
- describe the process of documenting technical specifications
- outline linkage between processes
- discuss systems diagnostic features
- summarise the following technologies:
 - power supply requirements and management
 - registered random access memory (RAM)
 - server design and network architecture
 - set up and configuration procedures
 - single and multiple processors
 - vendor specifications and requirements for software installation
 - virtual server functionality.

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 telecommunications – sustainability field of work and include access to:

- a site and equipment on which servers can be virtualised
- server virtualisation currently used in industry
- relevant documentation, feasibility studies, equipment manuals and other site-related documentation.

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