



Australian Government

ICTNWK534 Monitor and troubleshoot virtual computing environments

Release: 1

ICTNWK534 Monitor and troubleshoot virtual computing environments

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 monitor and troubleshoot, virtualisation technologies to provide a more efficient and reliable information and communications technology (ICT) environment.

It applies to senior networking staff responsible for increasing the sustainability of an enterprise.

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. Plan the strategies to monitor and troubleshoot the performance of the enterprise's virtual computing environment	1.1 Develop a plan to monitor the virtual environment to ensure its availability and optimal performance, according to the enterprise requirements 1.2 Identify the virtual environment's critical activity level, and assign resources as needed 1.3 Review the system's logs and alerts, in order to facilitate virtual environment tuning
2. Manage virtual environment performance to ensure full resource	2.1 Monitor and diagnose the memory central processing unit (CPU) and distributed power management performance

ELEMENT	PERFORMANCE CRITERIA
optimisation	2.2 Review the storage and cluster performance, in order to maximise operational efficiency 2.3 Monitor tasks, events and alarms, and network activity, and make relevant adjustments to ensure optimal operation
3. Analyse and troubleshoot the virtual environments	3.1 Review virtual machine capacity, application, storage, input and output (I/O) performance, to identify and resolve any performance issues 3.2 Test, analyse and troubleshoot, identified virtual network problems 3.3 Analyse and troubleshoot, high availability to ensure that the virtual machines are running at optimal performance levels 3.4 Consult with the virtualisation software vendors to provide solutions, where required
4. Diagnose virtual environment faults and provide solutions	4.1 Use virtualisation client and server management software tools, to help diagnose any virtual environment problems 4.2 Install and configure external virtualisation management tools, to help diagnose any virtual environment problems 4.3 Use system logs and alerts to collect and analyse errors 4.4 Evaluate problems using log files and alerts

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	1.2, 1.3, 2.2, 3.1, 3.3, 4.3, 4.4	Critically analyses documentation from a variety of sources and records, and consolidates information, to determine requirements
Writing	1.1	Writes, edits and proofreads documents to ensure clarity of meaning, and accuracy, and the consistency of information
Oral Communication	3.4	Presents complex information in formal situations, using clear and convincing language, and the tone and pace appropriate for the audience and purpose

Get the work done	1.2, 1.3, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 4.1, 4.2, 4.3	• Accepts responsibility for planning and sequencing complex tasks and workload, negotiating key aspects with others, taking into account capabilities, efficiencies and effectiveness • Monitors the progress of plans and schedules, and reviews and changes them, to meet new demands and priorities • Applies systematic and analytical decision-making processes for complex and non-routine situations • Investigates new and innovative ideas, as a means by which to continuously improve work practices and processes, through consultation, formal and analytical thinking
-------------------	---	---

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTNWK534 Monitor and troubleshoot virtual computing environments	ICANWK534A Monitor and troubleshoot virtual computing environments	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 ICTNWK534 Monitor and troubleshoot virtual computing environments

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- monitor the enterprise's virtual computing environment, using the correct management tools
- configure the enterprise's virtual computing environment to operate at an optimal performance level
- troubleshoot problems in the virtual computing environment, using the relevant management tools.

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:

- identify and review, current government and industry policies, and guidelines, relating to the development of efficient and reliable, information and communications technology (ICT) environments
- define the current technologies, and processes, designed to produce an efficient and reliable ICT environment
- specify the structure, functions and business organisation of the client
- identify and apply, the available tools and software applications required to manage virtual machines
- specify the configuration of software applications required to manage virtual machines
- specify the configuration 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
- the network's technical requirements
- a range of suitable software.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -

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