



Australian Government

ICTNWK409 Create scripts for networking

Release: 1

ICTNWK409 Create scripts for networking

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 undertake scripted programming tasks for networking related activities.

It applies to individuals with competent technical skills employed in network or systems administration roles.

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. Develop algorithms to represent solutions to a given problem	1.1 Consult with client and key stakeholders to identify the problem and associated script requirements 1.2 Employ abbreviated software development cycle to script creation 1.3 Develop an algorithm to solve the problem and meet client requirements 1.4 Develop an algorithm which takes account of expected possible situations 1.5 Develop an algorithm which is guaranteed to end 1.6 Use structure, sequence, selection and iteration

ELEMENT	PERFORMANCE CRITERIA
2. Create code	2.1 Select appropriate scripting language 2.2 Demonstrate understanding and application of basic language syntax rules and best practices 2.3 Select and use language data types, operators and expressions to create clear and concise code 2.4 Use techniques of selection, iteration and sequence to control script execution flow 2.5 Use techniques for sequential file input and output to retrieve and store information 2.6 Obtain and use user input to affect the operation of the script 2.7 Apply internal document principles to created code 2.8 Follow organisational guidelines for developing maintainable code when creating scripts 2.9 Adhere to coding standards when creating scripts
3. Use operating system tools	3.1 Use searching and sorting tools to select information from the logging output of operating system (OS) 3.2 Implement controls to ensure that where significant events occur, script creates and maintains a log of operations via operating system logging mechanism 3.3 Register and run scripts with OS scheduling facility
4. Test and debug code	4.1 Engineer, document and conduct simple tests to confirm code meets design specification 4.2 Identify areas that are not covered or are covered incorrectly in the script 4.3 Take action to ensure that code complies with security policy 4.4 Take action to ensure that code operates with proper permissions 4.5 Use script debugging techniques suitable for use with scripting language to detect and resolve errors of syntactical, logical and design origin
5. Document script	5.1 Create technical-level documentation 5.2 Create user-level documentation

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	2.8, 2.9, 4.3	Recognises and interprets technical material, organisational policy and regulatory information to determine job requirements
Writing	2.7, 3.2, 4.1, 5.1, 5.2	Prepares user, peer and technical documentation that communicates complex information clearly and effectively
Oral Communication	1.1, 2.6	Uses listening and questioning skills to confirm understanding for requirements, participates in a verbal exchange of ideas/solutions and uses appropriate, detailed and clear language to address key personnel and to disseminate information
Navigate the world of work	2.8, 2.9, 4.3	Recognises and follows explicit protocols and meets expectations associated with own role
Numeracy	1.3-1.5, 2.3	Creates complex algorithms to calculate and process data for code creation
Get the work done	1.2, 2.1-2.5, 2.8, 3.1-3.3, 4.1, 4.2, 4.4, 4.5	- Uses logical planning processes and an increasingly intuitive understanding of context to identify relevant information to plan business requirements - Reflects on the ways in which digital systems and tools are used, or could be used, to achieve work goals and begins to recognise strategic and operational applications - Understands the key principles and concepts underpinning the design and operation of digital systems and tools, and applies these when troubleshooting existing technology - Seeks advice and feedback from client when making decisions - Applies formal problem solving processes when tackling an unfamiliar problem, breaking complex issues into manageable parts and identifying and evaluating options

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTNWK409 Create scripts for networking	ICANWK409A Create scripts for networking	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 ICTNWK409 Create scripts for networking

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:

- develop an algorithmic statement of a solution for a set process
- design, document, construct and test a small single purpose operating system (OS) utility application in response to a problem description
- create scripted programs that access information stored in files on the system and use system utility programs to sort or find information within these files
- validate and record script results.

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 principles of algorithm design
- identify and describe operating system components and processes, including:
 - command line interface
 - log files
 - program scheduling utilities
 - development methodologies
 - tools and utilities
 - testing methods
- explain debugging for a variety of scripting scenarios
- outline programming structured control constructs: sequence, selection and iteration
- summarise scripting techniques and language syntax.

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:

- technical requirements
- software development environment
- software testing environment.

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>