



Australian Government

Department of Education, Employment and Workplace Relations

ICAB4220B Create scripts for networking

Release: 1

ICAB4220B Create scripts for networking

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit defines the competency required to undertake scripted programming tasks for networking related activities. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		
	ICAB4225B	Automate processes

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Create scripts	1.1. Employ abbreviated software development cycle to script creation 1.2. Select appropriate scripting language 1.3. Apply internal document principles to all created code 1.4. Follow organisational guidelines for developing maintainable code when creating scripts 1.5. Adhere to coding standards when creating scripts 1.6. Execute example scripts and record outcomes
2. Create code	2.1. Demonstrate understanding and application of basic language syntax rules and best practices 2.2. Select and use language data types, operators and expressions to create clear and concise code 2.3. Use techniques of selection, iteration and sequence to control script execution flow 2.4. Use techniques for sequential file input and output to retrieve and store information 2.5. Obtain and use user input to affect the operation of the script
3. Use operating system tools	3.1. Use searching and sorting tools to select information from the logging output of operating system 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 operating system scheduling facility
4. Debug code	4.1. Use script debugging techniques suitable for use with scripting language to detect and resolve errors of syntactical, logical and design origin
5. Test code	5.1. Engineer, document and conduct simple tests to confirm code meets design specification 5.2. Take action to ensure that code complies with security policy 5.3. Take action to ensure that code operates with proper permissions
6. Create small utilities	6.1. Design, document, construct and test a small single purpose operating system utility application in response to a problem description 6.2. Validate and record script results

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Creation of scripts to automate operating system tasks
- Manipulate and extract information contained in files
- Execution of scripts
- User and peer documentation
- Interaction with user via script

Required knowledge

- Operating system command line interface
- Operating system tools and utilities
- Operating system logical model
- Scripting language syntax
- Scripting techniques

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- Assessment must ensure the ability to create scripted programs that access information stored in files on the system, use system utility programs to sort or find information within these files and whose execution flow is controlled using the techniques of selection, iteration and sequence. Scripts must contain a level of documentation suitable for peer review and to provide modification/testing audit trail.

To demonstrate competency in this unit the person will require access to:

- Software development environment
- Technical requirements

Context of and specific resources for assessment

Scripting languages form a key part of networking, including automating processes, log analysis and intrusion detection.

The breadth, depth and complexity of knowledge and skills in this competency would cover a broad range of varied activities or application in a wider variety of contexts most of which are complex and non-routine. Leadership and guidance would be involved when organising activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Assessment must ensure:

- Performance of a broad range of skilled applications including the requirement to evaluate and analyse current practices, develop new criteria and procedures for performing current practices and provision of some leadership and guidance to others in the application and planning of the skills would be

EVIDENCE GUIDE	
	characteristic. • Applications may involve responsibility for, and limited organisation of, others.
Method of assessment	The purpose of this unit is to define the standard of performance to be achieved in the workplace. In undertaking training and assessment activities related to this unit, consideration should be given to the implementation of appropriate diversity and accessibility practices in order to accommodate people who may have special needs. Additional guidance on these and related matters is provided in ICA05 Section 1. • Competency in this unit should be assessed using summative assessment to ensure consistency of performance in a range of contexts. This unit can be assessed either in the workplace or in a simulated environment. However, simulated activities must closely reflect the workplace to enable full demonstration of competency. • Assessment will usually include observation of real or simulated work processes and procedures and/or performance in a project context as well as questioning on underpinning knowledge and skills. The questioning of team members, supervisors, subordinates, peers and clients where appropriate may provide valuable input to the assessment process. The interdependence of units for assessment purposes may vary with the particular project or scenario.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. An individual demonstrating this competency would be able to: • Demonstrate understanding of a broad knowledge base incorporating some theoretical concepts • Apply solutions to a defined range of unpredictable problems • Identify and apply skill and knowledge areas to a

EVIDENCE GUIDE

	wide variety of contexts, with depth in some areas • Identify, analyse and evaluate information from a variety of sources • Take responsibility for own outputs in relation to specified quality standards • Take limited responsibility for the quantity and quality of the output of others • Maintain knowledge of industry products and services Additionally, an individual demonstrating this competency would be able to: • Understand basic scripting development methodologies and their application • Demonstrate basic theoretical knowledge of language development
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Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Organisational guidelines</i> may include but are not limited to:	• personal use of emails and internet access • content of emails • downloading information and accessing particular websites • opening mail with attachments • virus risk • dispute resolution • document procedures and templates • communication methods • financial control mechanisms
<i>Language</i> may include but is not	• Java • C++

RANGE STATEMENT	
limited to:	• Small Talk • VB.net
Coding standards may include:	• Java coding standard • GNU coding standard
Operating system	• May include but is not limited to Linux 7.0 or above, Windows 2000 or above, Apple OS X or above, Novel Netware 5 or above. • Selected information from the logging output of the system may be used to affect script operations

Unit Sector(s)

Unit sector	Build
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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