



Australian Government

Department of Education, Employment and Workplace Relations

ICAI3020B Install and optimise operating system software

Release: 1

ICAI3020B Install and optimise operating system software

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit defines the competency required to install operating system software and to make adjustments as a means of optimising the system to accommodate business and client needs. The following units are linked and form an appropriate cluster: • ICAS3024B Provide basic system administration • ICAT3025B Run standard diagnostic tests
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

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. Determine function of operating systems	1.1. Identify and demonstrate understanding of the purposes of the operating system 1.2. Distinguish between batch system, real-time system, multi-tasking system 1.3. Identify and demonstrate understanding of the basic functions of operating system , including file system, memory management, process scheduling 1.4. Identify and demonstrate management of virtual memory
2. Obtain operating system	2.1. Contact operating system vendors to obtain technical specifications and system requirements 2.2. Document adjustment recommendations and provide to appropriate person 2.3. Determine and apply knowledge of licensing, hardware and security requirements
3. Install, configure and optimise operating system	3.1. Install, configure and test the operating system software in accordance with installation procedures and organisational requirements 3.2. Optimise the system to meet organisational requirements 3.3. Document the system according to organisational requirements 3.4. Install the operating system with minimal disruption to client or users
4. Provide instruction to meet new software requirements	4.1. Provide one-to-one instruction about changes to the client or users as required 4.2. Obtain client evaluation about new system to ensure requirements are met, using appropriate feedback mechanism

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

REQUIRED SKILLS AND KNOWLEDGE

- Problem solving skills for a defined range of predictable problems
- Plain English literacy and communication skills in relation to analysis, evaluation and presentation of information
- Report writing skills for business, requiring depth in some areas, analysis and evaluation of information in a defined range of areas
- Strong interpersonal skills for team work and responsible workplace interactions
- Software installation and configuration
- Questioning and active listening for conveying and clarifying information
- Literacy skills in regard to interpretation of technical computer installation manuals
- Use of diagnostic tools

Required knowledge

- Organisational and technical systems
- Detailed knowledge of the system's current functionality
- Functions and features of operating systems used by the organisation
- Set-up and configuration procedures
- Current industry-accepted hardware and software products, with broad knowledge of general features and capabilities and detailed knowledge in some areas
- Software packages supported by the organisation
- Prerequisites for system software installation
- Vendor specifications and requirements for installation
- Broad knowledge of incorporating systems software
- Broad general knowledge of systems diagnostic software

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 confirm the ability to install and improve system performance with minimum disruption to clients. To demonstrate competency in this unit the person will require access to: - Personal computer/workstation Operating System software and technical documentation
Context of and specific resources for assessment	The breadth, depth and complexity of knowledge and skills in this competency would cover selecting, adapting and transferring skills and knowledge to new environments and providing technical advice and some leadership in resolution of specified problems. This would be applied across a range of roles in a variety of contexts with some complexity in the extent and choice of options available. Assessment must ensure: - Performance of a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints would be characteristic. - Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.
Method of assessment	The purpose of this unit is to define the standard of performance to be achieved in the workplace. In

EVIDENCE GUIDE

	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, for example: - ICAS3024B Provide basic system administration - ICAT3025B Run standard diagnostic tests An individual demonstrating this competency would be able to: - Demonstrate some relevant theoretical knowledge - Apply a range of well-developed skills - Apply known solutions to a variety of predictable problems - Perform processes that require a range of well-developed skills where some discretion and judgement is required - Interpret available information, using discretion and

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	judgement • Take responsibility for own outputs in work and learning • Take limited responsibility for the output of others • Maintain knowledge of industry products and services
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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>Operating System</i> may include but is not limited to:	• Linux 7.0 or above • Windows 2000 or above • Apple OS X or above
<i>Appropriate person</i> may include:	• supervisor • teacher • authorised business representative • client
<i>Software</i> may include but is not limited to:	• operating systems, including standalone personal computer systems and network operating systems; commercial software applications; organisation-specific software; word processing, spreadsheet, database, graphic, mail, communication packages and presentation functionalities
<i>Feedback mechanism</i> may include:	• surveys • questionnaires • interviews • meetings
<i>Organisational requirements</i> may include but are not limited to:	• Availability of system to be optimised • Level of complexity of technical manuals • In-house or vendor; contracting arrangements relating to IT purchasing

RANGE STATEMENT	
	• Client support documentation • IT policy and procedures relating to service levels and installation
<i>Client</i> may include:	• a person within a department • a department within the organisation • a third party

Unit Sector(s)

Unit sector	Implement
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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