



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **ICAS2017B Maintain system integrity**

**Release: 1**

## ICAS2017B Maintain system integrity

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit defines the competency required to protect and secure standalone or client server environments.</p> <p>The following units are linked and form an appropriate cluster:</p> <ul style="list-style-type: none"> <li>• ICAS2008B Maintain inventories for equipment, software and documentation</li> <li>• ICAU2005B Operate computer hardware</li> <li>• ICAU1131B Operate a database application</li> </ul> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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### Application of the Unit

<b>Application of the unit</b>	
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### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	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. Carry out system backup	1.1. Create and/or review organisational <b>back-up schedule</b> 1.2. Determine <b>storage media</b> and <b>hardware</b> for back-ups 1.3. File back-ups are carried out according to the schedule 1.4. Label and store back-ups according to <b>organisational standards</b> 1.5. Maintain records of back-ups
2. Restore system backup	2.1. Determine and test restoration procedures according to <b>organisational standards</b> 2.2. Restore data under instruction from an <b>appropriate person</b> 2.3. Restore data according to <b>organisational standards</b> 2.4. Document and report on back-up results
3. Carry out virus scanning	3.1. Maintain <b>virus protection</b> software and updates depending on the <b>operating system</b> in use 3.2. Scan for and report detected viruses to <b>appropriate person</b> and remove the viruses
4. Follow copyright procedures and record software licences where appropriate	4.1. Identify <b>licensed software</b> used by the organisation 4.2. Maintain records of licence number and location 4.3. Monitor the operation and use of <b>licensed software</b> where applicable 4.4. Check personal computers and networks to ensure software compliance 4.5. Report licensing anomalies related to <b>software</b> to an <b>appropriate person</b>

## Required Skills and Knowledge

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <p>This section describes the skills and knowledge required for this unit.</p>
<p><b>Required skills</b></p>
<ul style="list-style-type: none"> <li>• Communication skills in relation to presentation of information</li> <li>• Basic diagnostic skills in relation to system integrity</li> </ul>

**REQUIRED SKILLS AND KNOWLEDGE**

- Questioning and active listening for clarifying instructions
- Basic analytical skills in relation to system integrity
- Problem solving skills for a defined range of predictable problems
- Problem solving in regard to known problems in routine procedures
- Research skills for identifying broad features of current viruses and best practice in virus protection

**Required knowledge**

- Software copyright and General Public Licence (GPL)/copyright responsibilities
- Broad knowledge of system performance
- Broad knowledge of maintenance procedures
- Broad knowledge of inventory procedures
- Restore procedures
- Broad knowledge of storage and retrieval guidelines
- Current industry-accepted hardware and software products, with broad knowledge of general features and capabilities and detailed knowledge in some areas
- Broad knowledge of diagnostic tools
- Broad knowledge of current viruses and protection methods

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>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.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• Assessment must confirm the ability to protect and secure standalone or networked client server environments and operating systems according to system maintenance procedures. Undertaking file back-up, restore, delete and archive are carried out according to back-up and restore procedures.</li> </ul> <p>To demonstrate competency in this unit the learner will require access to:</p> <ul style="list-style-type: none"> <li>• Back-up guidelines</li> <li>• Anti-virus software</li> <li>• Workstation</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>The breadth, depth and complexity of knowledge and skills in this competency would prepare a person to perform in a range of varied activities or knowledge applications where there is a clearly defined range of contexts in which the choice of actions required is usually clear. There would generally be limited complexity in the range of operations to be applied.</p> <p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• Performance of a prescribed range of functions involving known routines and procedures and some accountability for the quality of outcomes would be characteristic.</li> <li>• Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others as part of a group or team.</li> </ul>
<b>Method of assessment</b>	<p>The purpose of this unit is to define the standard of performance to be achieved in the workplace. In</p>

<b>EVIDENCE GUIDE</b>	
	<p>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.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>
<p><b>Guidance information for assessment</b></p>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• ICAU2005B Operate computer hardware</li> <li>• ICAS2008B Maintain inventories for equipment, software and documentation</li> <li>• ICAU1131B Operate a database application</li> </ul> <p>An individual demonstrating this competency would be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate basic operational knowledge in a moderate range of areas</li> <li>• Apply a defined range of skills</li> <li>• Apply known solutions to a limited range of predictable problems</li> <li>• Perform a range of tasks where choice between a</li> </ul>

<b>EVIDENCE GUIDE</b>	
	limited range of options is required <ul style="list-style-type: none"> <li>• Assess and record information from varied sources</li> <li>• Take limited responsibility for own outputs in work and learning</li> <li>• Maintain knowledge of industry products and services</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>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.</p>	
<b>Hardware</b> may include:	<ul style="list-style-type: none"> <li>• personal computers</li> <li>• networked systems</li> <li>• tools to perform back-ups such as tapes</li> <li>• streamers</li> <li>• floppy disks</li> </ul>
<b>Back-up schedule</b> may occur on:	<ul style="list-style-type: none"> <li>• evenings</li> <li>• weekdays</li> <li>• weekends</li> <li>• monthly</li> <li>• yearly</li> <li>• or a combination</li> </ul>
<b>Licensed software</b> may include:	<ul style="list-style-type: none"> <li>• single user licences</li> <li>• corporate licences</li> <li>• educational licences</li> <li>• user-restrictive licences</li> <li>• shareware licences</li> </ul>
<b>Operating system</b> may include but is not limited to:	<ul style="list-style-type: none"> <li>• Linux 6.0 or above</li> <li>• Windows 98 or above</li> <li>• Apple OS 8 or above</li> </ul>
<b>Storage media</b> may include but is not limited to:	<ul style="list-style-type: none"> <li>• diskettes (floppy disks)</li> <li>• CDs</li> </ul>



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• CD-RW (compact disks-read write)</li> <li>• DVD RW</li> <li>• zip disks</li> <li>• solid state hard drives</li> </ul>
<i>Appropriate person</i> may include"	<ul style="list-style-type: none"> <li>• supervisor</li> <li>• teacher</li> <li>• authorised business representative</li> <li>• client</li> </ul>
<i>Software</i> may include but is not limited to:	<ul style="list-style-type: none"> <li>• commercial, in-house, packaged or customised software</li> </ul>
<i>Organisational standards</i> may include but are not limited to:	<ul style="list-style-type: none"> <li>• security procedures</li> <li>• back-up procedures</li> <li>• restore procedures</li> <li>• virus scanning and removal procedures</li> <li>• software licence documentation</li> <li>• reporting of non-compliance software</li> <li>• GPL/copyleft licences</li> </ul>
<i>Virus protection</i> may include but is not limited to:	<ul style="list-style-type: none"> <li>• McAfee</li> <li>• Panda AntiVirus</li> <li>• Protector Plus Antivirus</li> <li>• Symantec Norton Antivirus</li> <li>• Command Antivirus</li> <li>• Vet. AMIvirus</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Support
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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