



Australian Government

Department of Education, Employment and Workplace Relations

ICAS3115B Maintain equipment and software in working order

Release: 1

ICAS3115B Maintain equipment and software in working order

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit defines the competency required to carry out maintenance and fault repair according to organisational procedures, in order to keep equipment and software operating.</p> <p>The following units are linked and form an appropriate cluster:</p> <ul style="list-style-type: none">• ICAT3025B Run standard diagnostic tests• ICAS3034B Determine and action network problems• ICAI3021B Connect internal hardware components• ICAU3019B Migrate to new technology <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

Application of the unit	
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units	

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 and undertake required equipment maintenance	1.1. Examine and review specified <i>equipment</i> and <i>maintenance</i> procedures, in order to determine those procedures that can be handled internally 1.2. Organise and undertake internal <i>maintenance</i> , as specified in the <i>maintenance</i> procedures 1.3. Report problems promptly to <i>appropriate person</i>
2. Diagnose and repair faults	2.1. Assess an existing problem situation and identify the main problem area 2.2. Test the suspected faulty <i>equipment</i> or <i>software</i> for possible failures or performance degradation, utilising available technology 2.3. Organise and analyse the test results 2.4. Review and analyse historical fault data for information of relevance to existing faults 2.5. Develop plans, with prioritised tasks and contingency arrangements, for the repair or replacement of faulty <i>equipment</i> or <i>software</i> , with minimum disruption to client 2.6. Liaise with <i>appropriate person</i> to obtain approval for the plans 2.7. Obtain necessary <i>components</i> and repair the <i>equipment</i> or <i>software</i> in a timely, organised manner, following <i>OH&S standards</i>
3. Update documentation and make recommendations for future maintenance	3.1. Record <i>maintenance</i> and fault data and equipment modifications, in accordance with organisational standards 3.2. Identify and report instances where preventative measures are needed 3.3. Review and update maintenance and fault data and report outcomes periodically to <i>appropriate person</i>

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

- Risk analysis of maintenance procedures
- Reading and interpretation of technical manuals
- Technical diagnostic skills
- Problem solving skills for a defined range of unpredictable problems
- Language, literacy and communication skills necessary to process and present verbal and written information
- Analysis and evaluation of information in a defined range of areas
- Record keeping skills

Required knowledge

- Broad knowledge of equipment and software maintenance practices
- Familiarity with current industry-accepted hardware and software testing and diagnostic tools, with the ability to utilise them effectively
- Relevant service-level agreements (SLAs) in order to determine the conditions of the SLA cover
- Knowledge of the client warranty claims, repair or replacement procedures
- Detailed knowledge of the system's current functionality
- Broad knowledge of quality assurance practices
- Operation and purpose of specified equipment
- Operation of technical diagnostic tools
- Detailed knowledge of help desk response level escalation procedures

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 undertake maintenance according to maintenance procedures, resolve a defined range of equipment and software problems, and maintain accurate records according to organisational guidelines.

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

- Technical environment with a variety of operational equipment and software
- Technical manuals and tools
- Maintenance procedures
- Equipment and/or software

Context of and specific resources for assessment

Maintaining equipment and software in good order relates to house-keeping within the organisation. The outcomes from maintaining software and equipment in sound working order are reliability and stability for end users, consistency of performance and less down time.

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,

EVIDENCE GUIDE	
	<p>where some discretion and judgement is required in the section of equipment, services or contingency measures and within known time constraints would be characteristic.</p> <ul style="list-style-type: none"> • Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.
Method of assessment	<p>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.</p> <ul style="list-style-type: none"> • 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	<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"> • ICAT3025B Run standard diagnostic tests • ICAS3034B Determine and action network problems • ICAI3021B Connect internal hardware components

EVIDENCE GUIDE

	<ul style="list-style-type: none"> ICAU3019B Migrate to new technology <p>An individual demonstrating this competency would be able to:</p> <ul style="list-style-type: none"> 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 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.

Appropriate person may include:

- supervisor
- teacher
- authorised business representative
- client

Hardware may include but is not limited to:

- workstations
- personal computers
- modems or other connectivity devices
- networks
- DSL modems
- remote sites

RANGE STATEMENT	
	<ul style="list-style-type: none"> • servers
Equipment may include but is not limited to:	<ul style="list-style-type: none"> • workstations • personal computers • modems or other connectivity devices • printers • DSL modems • hard drives • monitors • switches • hubs • personal digital assistant (PDA) • other peripheral devices
Software may include but is not limited to:	<ul style="list-style-type: none"> • commercial, in-house, packaged or customised software
Client may include but is not limited to:	<ul style="list-style-type: none"> • internal departments • external organisations • individual people • employees
Components may include:	<ul style="list-style-type: none"> • motherboards • CMOS battery • central processing unit (CPU) • CD and DVD drives • interface cards • drives • fax/modem cards • RAM upgrades • CPU upgrades
Maintenance may include:	<ul style="list-style-type: none"> • on-site response • remote diagnostics • return to depot
OH&S standards may include:	<ul style="list-style-type: none"> • correct posture • lighting • type of desk • type of monitor • style of chair • typing position • repetitive strain injury prevention • ventilation • light position

RANGE STATEMENT

	<ul style="list-style-type: none">• correct lifting method• length of time in front of computer
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Unit Sector(s)

Unit sector	Support
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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