



Australian Government

Department of Education, Employment and Workplace Relations

ICAS4191B Maintain website performance

Release: 1

ICAS4191B Maintain website performance

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit defines the competency required to ensure that a website maintains its performance levels during peak traffic times and during full utilisation access. The following units are linked and form an appropriate cluster: • ICAS4124B Monitor and administer network security 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		

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. Benchmark website performance	1.1. Review client performance expectations from specifications and business requirements 1.2. Test administration and maintenance requirements against specifications and business requirements 1.3. Establish performance benchmarks from specifications and business requirements 1.4. Ensure performance benchmarks are tested 1.5. Record measured performance benchmarks against specifications
2. Track website performance	2.1. Measure actual website performance against performance benchmarks in key areas and record outcomes 2.2. Establish procedures and policies for maintaining stability of actions and processes related to the website 2.3. Identify faults or suggest improvements to the website 2.4. Implement improvements according to business requirements and in line with policies and procedures 2.5. Establish automatic fault reporting procedures and processes 2.6. Monitor and maintain website security measures 2.7. Implement administration and maintenance schedules 2.8. Establish preventative maintenance and administration indicators and ensure an alert system is enabled 2.9. Track user activities and make changes to policies or procedures, depending on findings
3. Tune performance	3.1. Compare actual website performance against benchmarks over an appropriate period and make changes based on inconsistencies 3.2. Record performance inconsistencies and incorporate learning into revised policies and procedures 3.3. Use diagnostic and software tools to identify and correct website faults 3.4. Plan and action preventative maintenance on a regular basis, to ensure continuous and consistent performance of website

ELEMENT	PERFORMANCE CRITERIA
	3.5. Complete and record fault correction and maintenance reports
4. Initiate and monitor performance improvement	4.1. Establish a mechanism for capturing client initiatives to assist in identifying maintenance or administration process performance problems 4.2. Review security tools and procedures and conduct improvements where necessary 4.3. Document and implement maintenance schedules 4.4. Review maintenance and administration documentation in line with policies and procedures, in order to identify areas for performance improvement 4.5. Update the website on a regular basis, including information, links, multi-media links and back-end software 4.6. Provide a timely and appropriate response to client to provide improvement or maintenance suggestions

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- Website development
- Website analysis
- Technical test design
- Test implementation
- Test evaluation
- Evaluation feedback
- Evaluation analysis
- Fault diagnosis
- Fault correction
- Implementing administration and maintenance schedules

Required knowledge

- Website architecture
- Basic website security

REQUIRED SKILLS AND KNOWLEDGE

- Basic workload (web traffic) metrics
- Basic business process design
- Customer and business liaison

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 develop and maintain actual website performance against benchmarks, to ensure that the website meets specifications.
- Where performance criteria are not met, faults must be identified and appropriate remedial action taken.
- Assessment must verify the ability to implement scheduled and non-scheduled maintenance and to effectively monitor and tune website performance.

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

- Web servers and websites
- Technical requirements
- Web traffic diagnostic tools, including timing tools to gauge website response times

Context of and specific resources for assessment

The effective and efficient operation of an organisation's website is of critical importance when business transactions are conducted online. Additionally, a website provides a 'new window' into an organisation and as such provides existing and potential clients with an indication of organisational credibility, effectiveness and efficiency.

The rapid growth in the use of websites as the primary media for client interaction, places considerable strategic and operational importance on activities around effective website monitoring and performance.

Testing the website under different conditions of load is essential to understanding how it behaves from the client's perspective. Thus, testing tools should include some way of simulating traffic from numerous users.

EVIDENCE GUIDE	
	Breadth, depth and complexity of knowledge and skills would prepare a person to perform basic skills in managing website performance. Operations must be in accordance with organisational policies and procedures. Managing the performance of a website should be done under competent supervision where there is a clearly defined range of contexts for ensuring that ongoing demands on the site are met. 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 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.

EVIDENCE GUIDE	
	- 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: - ICAS4124B Monitor and administer network security An individual demonstrating this competency would be able to: - Demonstrate understanding of policies and procedures related to website performance, with theoretical knowledge of security issues - Apply known solutions to a variety of predictable website problems - Interpret available website information using discretion and judgement - Take responsibility for outputs in managing website performance - Maintain knowledge of industry products and services Additionally, an individual demonstrating this competency would be able to:

EVIDENCE GUIDE

	• 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 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
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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>Specifications</i> may include but is not limited to:	• technical requirements • user problem statement • current system functionality
<i>Client</i> may include but is not limited to:	• internal departments • external organisations • individual people • employees
<i>Requirements</i> may be in reference to:	• business • system • application • network • people in the organisation
<i>Business requirements</i> may include:	• customer • supplier • payroll • inventory

RANGE STATEMENT	
	• tax requirements of the organisation
Standards may include:	• ISO/IEC/AS standards • organisational standards • project standards (for further information refer to the Standards Australia website at: www.standards.com.au)
System may include but is not limited to:	• hardware and software components that run a computer
Software may include but is not limited to:	• commercial, in-house, packaged or customised software
Documentation may follow:	• ISO/IEC/AS standards • audit trails • naming standards • version control • project management templates • report writing principles
Policies	• Incident response procedures • network intrusion detection systems • forensic procedures • training • awareness raising policy

Unit Sector(s)

Unit sector	Support
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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