Australian Government

Department of Education, Employment and Workplace Relations

ICAWEB404A Maintain website performance

Release: 1

INDUSTRY
SKILLS
COUNCILS
Creating Australia's Future

ICAWEB404A Maintain website performance

Modification History

Version	Comments
ICAWEB404A	This version first released with *ICA11 Information and Communications Technology Training Package version 1.0*

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to ensure that a website maintains performance levels during peak traffic times and full use access.

Application of the Unit

This unit applies to information technology (IT) personnel who take responsibility for maintaining website performance.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
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.*

Elements and 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 organisational policy 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 policy 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
	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* according to policy and procedures, in order to identify areas for performance improvement
	4.5 Update the website on a regular basis, including information, links, multimedia 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

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

Required skills

- communication skills to liaise with clients and staff
- literacy skills to interpret standards and requirements
- numeracy skills to evaluate performance statistics
- planning and organisational skills to:
    - conduct user analysis
    - implement and administer maintenance schedules
    - technical skills to conduct website analysis.

Required knowledge

- detailed knowledge of:
    - security issues, such as denial of service, viruses and hackers
    - website server architecture (e.g. Linux, Windows, Unix)
- overview knowledge of:
    - Australian Computer Society Code of Ethics
    - business process design
    - commonwealth Privacy Act 2000
    - impact of copyright and intellectual property requirements on website performance
    - website security protocols
    - workload (web traffic) metrics.

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 ability to: • maintain website performance against benchmarks • ensure that website meets specifications • identify and rectify faults where performance criteria are not met • implement scheduled and non-scheduled maintenance • effectively monitor and tune website performance.
Context of and specific resources for assessment	Assessment must ensure access to: • web servers and websites • technical requirements • web-traffic diagnostic tools, including timing tools to gauge website response times • appropriate learning and assessment support when required. 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. Operations must be according to organisational policy 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. Where applicable, physical resources should include equipment modified for people with special needs.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • verbal or written questioning to assess candidate's knowledge of policy and procedures related to website performance, with theoretical knowledge of security issues

	• observation of candidate maintaining website performance against benchmarks • review of supporting documentation of the candidate's ability to manage website performance.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate. Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed. Indigenous people and other people from a non-English speaking background may need additional support. In cases where practical assessment is used it should be combined with targeted questioning to assess required knowledge.

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.

Client may include:	• employees • external organisations • individuals • internal departments.
Specifications may include:	• current system functionality • technical requirements • user problem statement.
Business requirements may include:	• customer • inventory • payroll • supplier • tax requirements of the organisation.
Requirements may relate to:	• application • business • network • people in the organisation • system.
Policies may include:	• awareness raising policy • forensic procedures • incident response procedures • network intrusion detection systems • training.
System may include:	• hardware • software components that run a computer.
Software may include:	• commercial • customised software • in-house • packaged.
Documentation may follow:	• audit trails • International Organization for Standardization (ISO), International Electrotechnical Commission (IEC) and Australian Standards (AS) standards • naming standards

	• project management templates
	• report writing principles
	• version control.

Unit Sector(s)

Web

Custom Content Section

Not applicable.