



Australian Government

Department of Education, Employment and Workplace Relations

ICAWEB407A Conduct operational acceptance tests of websites

Release: 1

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Modification History

Release	Comments
Release 1	This Unit first released with <i>ICAI1 Information and Communications Technology Training Package version 1.0</i>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to provide high-level assurance that websites can be effectively and efficiently provisioned and deployed live in a systematic manner.

Application of the Unit

This unit applies to web designers and web developers who are involved in testing the effectiveness of websites.

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
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>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.</i>

Elements and Performance Criteria

1. Prepare test	<p>1.1 Establish and document testing framework and schedule</p> <p>1.2 Determine processes and functions to be tested and assign quantitative and qualitative performance benchmarks to each process and function</p> <p>1.3 Benchmark and document page templates, style guides and expected traffic loads</p> <p>1.4 Determine and document <i>test methodology</i></p> <p>1.5 Assemble and brief the testing panel on the conduct of the test</p> <p>1.6 Develop <i>user</i> and installation manuals according to target audience understanding and needs</p>
2. Test individual pages	<p>2.1 Test pages against style guides and templates</p> <p>2.2 Test pages for consistency in structure and content</p> <p>2.3 Apply <i>automatic testing software</i></p> <p>2.4 Document page gross statistics of confirmed results of tests</p>
3. Test page relationships against business requirements	<p>3.1 Test installation and examples listed in instruction manual</p> <p>3.2 Test page navigability using a variety of <i>browsers</i></p> <p>3.3 Test ease of use and functionality against requirements</p> <p>3.4 Test <i>software</i> interface points against business and technical requirements</p> <p>3.5 Test site security and privacy against business requirements</p> <p>3.6 Test response time against business requirements</p> <p>3.7 Conduct load simulation testing using single and multiple independent browsers or automated load testing tools</p>
4. Apply and document further tests	<p>4.1 Test website's ability to handle concurrent access</p> <p>4.2 Test conformance to applicable privacy, accessibility and acceptable usage policy standards</p> <p>4.3 Apply automatic testing software</p> <p>4.4 Collect, collate and document results from sample user and data from automated test</p>
5. Evaluate test results	<p>5.1 Consolidate and compare results to benchmarks</p> <p>5.2 Identify results that fail to meet benchmarks and conduct site remedial iteration</p> <p>5.3 Record and document test results as the site performance baseline, against which further development or updating can be</p>

	measured 5.4 Provide evaluation feedback to <i>appropriate person</i> 5.5 Ensure appropriate person signs off on site prior to go live date
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Required Skills and Knowledge

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

Required skills

- communication skills to liaise with users and website developers
- literacy skills to:
 - document test results
 - document solutions according to organisational guidelines
 - interpret organisational requirements
- numeracy skills to deal with test results
- technical skills to:
 - analyse a website
 - design and implement technical tests
 - evaluate tests and give feedback on the evaluation
 - analyse the evaluation.

Required knowledge

- client business domain
- structure, function and business organisation of client, including business-process design
- organisational policies and procedures that cover routine work processes and the use of:
 - web optimising tools
 - web monitoring tools
 - web testing procedures
- technical performance measurement
- website accessibility and equity principles
- website design methods and standard website structures
- website security
- workload 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	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> • prepare an operational acceptance test that measures the independent and integrated structural content and technical components of the site • apply automatic testing software and collect, collate and document results or tests • evaluate and provide feedback on test results.
Context of and specific resources for assessment	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> • web servers • ebusiness website • site server • site server software • analysis software • requirements documentation • organisational requirements • customer relationship model • website manuals and instructions • appropriate learning and assessment support when required. <p>Where applicable, physical resources should include equipment modified for people with special needs.</p>
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct observation of candidate preparing an operational acceptance test • review of candidate's documented test results, particularly the quantitative results and their evaluation against predetermined benchmarks • verbal or written questioning to assess candidate's knowledge of requirements for high-level assurance of provisioning and deploying of websites.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate.</p> <p>Assessment processes and techniques must be culturally</p>

	<p>appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed.</p> <p>Indigenous people and other people from a non-English speaking background may need additional support.</p> <p>In cases where practical assessment is used it should be combined with targeted questioning to assess required knowledge.</p>
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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>Test methodology</i> may include:	<ul style="list-style-type: none"> • background testing • distributed performance testing • error recovery methodologies • exhaustive testing • functional testing • random testing • unattended testing • user acceptance testing.
<i>User</i> may include:	<ul style="list-style-type: none"> • department within the organisation • person within a department • third party • people who may have special needs.
<i>Automatic testing software</i> may include:	<ul style="list-style-type: none"> • cascading style sheet (CSS) check, link testers • hypertext markup language (HTML) validator • links • spell check.
<i>Browsers</i> may include:	<ul style="list-style-type: none"> • Galleon • Internet Explorer • Google Chrome • Konqueror • Lynx • Mozilla Firefox • Netscape Navigator • Opera • Phoenix.
<i>Software</i> may include:	<ul style="list-style-type: none"> • commercial software applications • in-house or customised • organisation-specific • packaged.
<i>Appropriate person</i> may include:	<ul style="list-style-type: none"> • authorised business representative • client • user • supervisor.

Unit Sector(s)

Web