



Australian Government

ICTSAS514 Perform integration tests

Release: 1

ICTSAS514 Perform integration tests

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to ensure that the components of the system operate together to the expected standard.

It applies to senior development staff who are responsible for ensuring that sub-systems function correctly when combined.

No licensing, legislative, or certification requirements apply to this unit at the time of publication.

Unit Sector

Systems administration and support

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for test	1.1 Prepare test environment 1.2 Prepare test scripts (online test) or test run (batch test) for running 1.3 Review expected results against test and acceptance criteria 1.4 Confirm pre-existing modules and compile modification logs 1.5 Perform static tests of each point of integration and verify correctness of arguments, positional parameters and return values in each integration suite 1.6 Review results of earlier component testing and ensure critical issues are identified and considered

ELEMENT	PERFORMANCE CRITERIA
2. Conduct test	2.1 Select appropriate test tools 2.2 Run test scripts and document results against software life cycle model 2.3 Ensure that memory leakage, global name-space pollution and static variables are specifically addressed for each integration unit in line with test and acceptance criteria 2.4 Follow and adopt integration standards where appropriate in line with quality benchmarks 2.5 Compare test results to requirements on completion of each integration component
3. Analyse and classify results	3.1 Summarise and classify test results and highlight areas of concern 3.2 Compare test results against requirements and design specification, and prepare report 3.3 Notify operations of completion of testing where appropriate 3.4 Ensure attendees' details and comments are logged and signatures gained 3.5 Schedule and conduct a feedback meeting to discuss report and possible next actions with stakeholders if necessary 3.6 Ensure test reporting complies with documentation and reporting standards

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.3, 1.6, 2.5, 3.2	Analyses and evaluates textual and numerical information from a range of documentation to determine required action
Writing	2.2, 3.1-3.4, 3.6	- Accurately records information and system data using required format, terminology and conventions specific to requirements - Prepares reports using concise language and correct spelling and grammar to convey explicit information,

		requirements and recommendations
Oral Communication	3.3-3.5	Uses clear and accurate language and inclusive and collaborative techniques to convey and obtain information from a range of personnel
Numeracy	1.3, 1.4, 2.5, 3.1	Uses mathematical equations to calculate, compare and evaluate numerical test data to determine required actions
Interact with others	3.3-3.5	Identifies and uses appropriate conventions and protocols when communicating with colleagues and stakeholders
Get the work done	1.1-1.6, 2.1-2.5, 3.1-3.6	- Develops plans to manage relatively complex routine and non-routine tasks with an awareness of how they might contribute to broader strategy and goals - Uses problem solving techniques in analysing required outcomes to perform integration tests - Uses digital technologies to manage information and communications technology (ICT) operations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTSAS514 Perform integration tests	ICASAS514A Perform integration tests	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTSAS514 Perform integration tests

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Performance Evidence

Evidence of the ability to:

- prepare the test environment
- conduct tests using appropriate test tools and integration standards and quality benchmarks
- perform integration requirements for the units
- determine whether the units operate according to specifications
- analyse and classify results
- prepare reports that comply with documentation and reporting standards.

Note: Evidence must be provided on at least TWO systems or occasions.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- describe the key features of at least two programming languages, with detailed knowledge of programming languages required by current system/project
- compare and contrast automated test tools, with detailed knowledge of features and processes of tools used for current system/project
- identify input and output requirements
- discuss organisational practice, standards and benchmarks relating to integration testing
- analyse and describe the system or application being tested
- describe key features and processes of testing techniques and tools
- analyse underlying test data.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the systems administration and support field of work, and include access to:

- special purpose tools, equipment and materials
- industry software packages
- acceptance criteria
- test plan
- integration standards
- requirements and design documents used in test analysis
- system or application suitable for testing.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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