



Australian Government

ICTSAS516 Perform stress and load tests on integrated platforms

Release: 1

ICTSAS516 Perform stress and load tests on integrated platforms

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 plan and perform tests to ensure the ability of a system to cope with expected high levels of data volume.

It applies to experienced individuals who provide specialised and technical knowledge in completing complex technical operations to ensure that the proposed system can handle anticipated loads.

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. Create test plan	1.1 Determine scope, objectives and specific tests to place load on the system, including expected results and performance impact 1.2 Determine and document standards for acceptance and compliance with client 1.3 Determine and document clear responsibilities and contact points with third party suppliers for support 1.4 Identify testing resources and tools from a range of available sources 1.5 Identify and record base-system loads or level of activity against which the test will be measured

ELEMENT	PERFORMANCE CRITERIA
	1.6 Identify processes or steps in test, including automated testing 1.7 Assemble test plan documentation and distribute to appropriate person
2. Undertake test	2.1 Implement test plan according to test plan sequencing 2.2 Confirm that each technology component operates correctly within integrated platform 2.3 Confirm that integrated platform operates to project and industry standards 2.4 Undertake documentation of testing outcomes to meet project standards 2.5 Detect faults
3. Diagnose and resolve faults	3.1 Identify and document faults according to project plan 3.2 Diagnose faults and take corrective action 3.3 Manage problem resolution processes according to project procedures 3.4 Enforce compliance standards with third party suppliers as required
4. Update documentation	4.1 Update appropriate project and system documentation to record and present test findings to development staff for their attention, if test is unsuccessful

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	1.1, 1.4	Interprets and analyses a range of textual information and numeric data from a range of technical sources to determine necessary actions
Writing	1.2-1.5, 1.7, 2.4, 3.1, 3.5, 4.1	Develops technical and procedural documentation using clear and precise language and numerical data to convey test outcomes, requirements and recommendations
Oral	1.3, 4.1	Uses clear and precise language to convey and present

Communication		- complex technical information to a range of personnel - Uses questioning and listening techniques to confirm understanding, gain consensus on concepts and clarify responsibilities
Numeracy	1.1, 1.5, 2.2, 4.1	Uses mathematical equations to calculate numerical data and compare test outcomes
Interact with others	1.3, 1.7, 3.4, 4.1	Identifies and uses appropriate conventions and protocols when communicating with colleagues and others
Get the work done	1.1-1.6, 2.1-2.5, 3.1-3.4	- 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 to analyse required outcomes to perform stress and load tests - Uses digital technologies to manage information and communications technology operations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTSAS516 Perform stress and load tests on integrated platforms	ICASAS516A Perform stress and load tests on integrated platforms	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 ICTSAS516 Perform stress and load tests on integrated platforms

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Performance Evidence

Evidence of the ability to:

- create a test plan and undertake a test that includes analysis of the system's ability to cope with expected high levels of data volume within predetermined performance standards
- identify problems and fault-resolution strategies that may occur during stress testing
- check that the system operates in the manner expected under expected conditions
- check that supporting material, including procedures and forms, is accurate and suitable for the purpose intended
- determine that stated conditions reflect the upper limits expected by client
- ensure there are no unacceptable reductions in service
- ensure individual elements and the overall system provide the desired result or functionality
- complete and update documentation accurately.

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

Knowledge Evidence

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

- compare and contrast the key features and processes of automated test tools
- analyse organisational requirements relating to stress and load testing
- evaluate program design and performance characteristics
- describe system or application requirements and performance
- describe key features and processes of testing techniques.

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
- business requirements
- project documentation, including templates, standards, specifications and client user and technical manuals
- business rules and expected loads
- base tools
- technical components of system, including software, hardware and network
- staffing resources, including development, operations and client user representatives
- system or application suitable for testing.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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