



Australian Government

ICTSAS523 Perform stress and load tests on integrated platforms

Release: 1

ICTSAS523 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 4.0.

Application

This unit describes the skills and knowledge required to plan and perform tests to assess and 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 a 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 and document standards for acceptance and compliance with user which meet organisational requirements 1.2 Determine and document test plan according to organisational requirements 1.3 Identify testing resources and tools meeting acceptance standards and compliance 1.4 Determine and document clear responsibilities and contact points with third party suppliers 1.5 Identify and record base-system loads and level of activity against which tests will be measured according to test plan 1.6 Finalise test plan and agree with superior

2. Undertake test	2.1 Test system technology components and determine if operates to organisational requirements and system specifications 2.2 Test integrated platform and determine if operates to organisational requirements and system specifications 2.3 Document test results to according to test plan
3. Diagnose and resolve faults	3.1 Document and prioritise faults according to test results and organisational requirements 3.2 Diagnose faults and rectify according to priority 3.3 Manage problem resolution processes with third party suppliers according to project procedures
4. Update documentation	4.1 Update project and system documentation with test results 4.2 Record and present test findings to development staff

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	Interprets and analyses a range of textual information and numeric data from a range of technical sources to determine necessary actions
Writing	Develops technical and procedural documentation using clear and precise language and numerical data to convey test outcomes, requirements and recommendations
Oral Communication	- Uses clear and precise language to convey and present complex technical information to a range of personnel - Uses questioning and listening techniques to confirm understanding, gain consensus on concepts and clarify responsibilities
Numeracy	Uses mathematical equations to calculate numerical data and compare test outcomes
Interact with others	Identifies and uses appropriate conventions and protocols when communicating with colleagues and others
Get the work done	- 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
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTSAS523 Perform stress and load tests on integrated platforms	ICTSAS516 Perform stress and load tests on integrated platforms	Edits to performance criteria to clarify intent. Updates to assessment requirements.	Equivalent unit

Links

Companion Volume Implementation Guides are available from VETNet -

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

Assessment Requirements for ICTSAS523 Perform stress and load tests on integrated platforms

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements and performance criteria of this unit; including evidence of the ability to:

- On two occasions on different systems:
 - Create a test plan including scope, objectives, specific automated tests to place high load on system and expected results and performance impacts
 - Undertake and analyse tests that include analysis of the system's ability to cope with expected high levels of data volume against standards
 - Develop documentation related to stress and load testing including third party responsibilities, processes or steps, test sequencing, and standards for acceptance
 - Identify the high data limits expected by the organisation and reflect in test plan and testing
 - Analyse test results to determine whether system and the individual components operate in the manner expected under expected conditions
 - Identify, diagnose, and rectify faults identified during testing
 - Document the test results and corrective action taken according to project standards and organisational requirements
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Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements and performance criteria of this unit. This includes:

- Key features and processes of automated test tools
- Third party software and resource options relevant to stress and load testing
- Program design and performance characteristics
- Key features and processes of testing techniques
- System load and level of activity monitoring methods
- Tests for system and system technology components
- Typical fault prioritisation

- Third party supplier communication and relationship management
- Organisational documentation procedures

Assessment Conditions

Skills must be demonstrated in a workplace or simulated environment where conditions are typical of those in an ICT working environment. This includes access to or availability of:

- Automated testing tools
- Individual to undertake role of user
- Individual development staff and superior in the organisation
- Organisational requirements relating to the system
- Project documentation, including templates, standards, specifications and user and technical manuals
- Business rules and expected loads
- Technical components of system including platform, software, hardware, and network
- Organisational testing procedures including standards
- System for testing

Assessors of this unit must satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

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