



Australian Government

ICTTEN808 Manage network testing strategies

Release: 1

ICTTEN808 Manage network testing strategies

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 manage a test regime for evaluation of application software for a telecommunications network.

It applies to individuals with high-level technical skills working as network engineers or senior technical staff within project management roles.

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

Unit Sector

Telecommunications Networks Engineering

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. Plan test effort and develop test strategy for an application software	1.1 Critically analyse functionalities of an application software from the system design document and create test strategy for new telecommunications product line 1.2 Produce steps for test strategy, including attributes of each step according to enterprise policy 1.3 Produce test strategy for evaluating suitability of application software for integration into telecommunications network 1.4 Critically analyse test strategy and identify types of risks that would hinder test performance or reality
2. Plan test strategy for	2.1 Produce phases of a test cycle for a test regime according to

ELEMENT	PERFORMANCE CRITERIA
regime	system design document 2.2 Assess a range of tests required to evaluate performance and functionality of application software and determine tests required to suit the test regime 2.3 Evaluate features of testing tool and debuggers and select an appropriate tool to test software application and detect faults 2.4 Evaluate elements of test plan that cover testing functionality of the application software
3. Design test plan and produce test reviews	3.1 Determine forecast time, effort and cost for low and medium intensity projects to perform testing 3.2 Develop a test case or test scenario with prerequisite states based on requirements to generate expected test results for test plan 3.3 Produce test plan for specific phases based on requirements of project specifications for the application software 3.4 Produce test reporting associated with particular test phases within test plan 3.5 Critically analyse test reports and evaluate impact of test plan on the testing environment 3.6 Manage progress of test plan to minimise risks associated with testing and ensure test compliance with test requirements 3.7 Report any detected defects to product evaluation personnel, and prepare a strategy to manage defects
4. Manage test traceability	4.1 Create a traceability matrix to correlate relationship between marketing requirements and detailed requirements of software product to matching parts of design, test plan and test cases 4.2 Critically analyse testing metrics produced by test tool to manage tracking of defects and plan process improvements based on the metrics 4.3 Produce an evaluation report from traceability matrix to manage defects or failures from the test plan

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, 1.2, 2.1, 3.5	Organises, evaluates and critiques ideas and information from a wide range of complex texts
Writing	1.1, 1.2, 1.3, 3.3, 3.7, 4.3	Prepares clear and concise workplace documentation including reports and recommendations incorporating technical language to communicate complex information clearly and effectively
Numeracy	3.1, 3.5, 4.2	Uses numerical information to interpret and evaluate different types of technical data, take measurements and determine cost-effective outcomes
Navigate the world of work	1.2	Adheres to organisational procedures and protocols
Interact with others	3.7	Selects and uses appropriate conventions and protocols when communicating with technical personnel in a range of work contexts
Get the work done	1.1-1.4, 2.1-2.4, 3.1-3.4, 3.6, 4.1, 4.2	- Uses a combination of formal, logical planning processes and an increasingly intuitive understanding of context for complex, high impact activities with strategic implications - Demonstrates a sophisticated understanding of principles, concepts, language and practices associated with the digital world and uses this to devise strategies - Implements actions according to a predetermined plan, making adjustments as necessary - Takes responsibility for high-impact decisions in complex situations involving many variables and constraints - May use formal analytical and lateral thinking techniques resolving software, hardware and logistics problems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTTEN808 Manage	ICTTEN7225A Manage	Updated to meet	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
network testing strategies	network testing strategies	Standards for Training Packages. Recoded and minor changes to PCs to meet AQF requirements.	

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 ICTTEN808 Manage network testing strategies

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Performance Evidence

Evidence of the ability to:

- produce steps in developing test strategy
- produce test strategy for evaluating suitability of application software
- design test plan and produce test reviews
- develop a test case or test scenario
- produce a test plan for specific phases
- produce test reporting associated with particular test phases within test plan
- create traceability matrix
- produce an evaluation report from the traceability matrix to manage defects or failures from the test plan.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

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

- explain applications software features and functionalities
- summarise configuration of software testing tools
- outline creation of a traceability matrix
- provide detailed summary of different elements of test plans and risks associated with implementation
- outline features of testing tools and debuggers
- explain identification of types of risks
- consider legislation, codes of practice and other formal agreements that directly impact testing
- explain how to manage software defects
- summarise management of test traceability

- outline phases of test cycles
- outline production of test reviews
- consider specific workplace health and safety (WHS) requirements that impact activity in terms of safety of self and the public
- explain relevant steps in developing test strategy
- outline testing procedures and testing cycles for various system applications.
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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 should be typical of those experienced in the Telecommunications – Telecommunications Networks Engineering field of work and include access to:

- a site where planning and management of a test regime for evaluation of application software may be conducted
- software tools currently used in industry
- vendor products, specifications, equipment and enterprise policy required for the activity.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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