



Australian Government

ICTTEN824 Manage network testing strategies

Release: 1

ICTTEN824 Manage network testing strategies

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to plan and manage a test regime for evaluation of application software for a 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 Analyse functionalities of an application software from the system design document and create test strategy for new network product lines 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 networks 1.4 Analyse test strategy and identify types of risks that would hinder test performance or reality
2. Plan test strategy for regime	2.1 Produce phases of a test cycle for a test regime according to system design document 2.2 Assess a range of tests required to evaluate performance and functionality of application software and determine tests required

ELEMENT	PERFORMANCE CRITERIA
	to suit the test regime 2.3 Evaluate features of testing tool and debuggers and select a required 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 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 confirm test compliance with test requirements 3.7 Report any detected defects to relevant 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 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 those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Numeracy	Uses numerical information to interpret and evaluate different types of technical data, take measurements and determine cost-effective outcomes
Reading	Organises, evaluates and critiques ideas and information from a wide range of complex texts
Writing	Prepares workplace documentation including reports and recommendations incorporating technical language to

SKILL	DESCRIPTION
	communicate complex information clearly and effectively
Teamwork	• Selects and uses required conventions and protocols when communicating with relevant personnel in a range of work contexts
Planning and organising	• Uses a combination of formal, logical planning processes and an understanding of context for complex, high impact activities with strategic implications • Takes responsibility for high-impact decisions in complex situations involving many variables and constraints
Self-management	• Adheres to organisational procedures and protocols
Technology	• Applies formal analytical and lateral thinking techniques for resolving software, hardware and logistics problems • Demonstrates a sophisticated understanding of principles, concepts, language and practices associated with the digital world and uses this to devise strategies

Unit Mapping Information

Supersedes and is equivalent to ICTTEN808 Manage network testing strategies.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for ICTTEN824 Manage network testing strategies

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Performance Evidence

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

- manage at least two network testing strategies.

In the course of the above, the candidate must:

- produce steps in developing test strategies
- produce test strategies for evaluating suitability of application software
- design test plan and produce test reviews
- produce test plans for specific phases
- develop test scenarios
- 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.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- required legislation, codes, company work practices, regulations and standards, workplace health and safety (WHS) requirements for scoped work
- applications software features and functionalities
- configuration of software testing tools
- creation of a traceability matrix
- different elements of test plans and risks associated with implementation
- features of testing tools and debuggers
- identification of types of risks
- how to manage software defects

- management of test traceability
- phases of test cycles
- production of test reviews
- required steps in developing test strategy
- testing procedures and testing cycles for various system applications
- workplace requirements for evaluation reports.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes 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 of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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