



**Australian Government**

# **ICTPRG551 Apply testing techniques for software development**

**Release: 1**

# ICTPRG551 Apply testing techniques for software development

## Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

## Application

This unit describes the skills and knowledge required to develop test strategies and implement tests to assure reliability and quality of an application.

It applies to quality assurance analysts, test analysts, testers, system testers, software testers, test leads and software developers, responsible for activities including test plan preparation, execution and maintenance, reporting of tests and defect management in an application.

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

## Unit Sector

Programming and software development

## 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 and design test	1.1 Analyse and review software development specifications against organisational requirements 1.2 Determine and document test context, scope, standard and methodology 1.3 Determine and document test types, tools and input data requirements 1.4 Design and document test plan and test cases according to software testing specifications 1.5 Submit documentation to required personnel and seek and respond to feedback
2. Prepare test environment	2.1 Review documents and determine required preparation for test environment

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	2.2 Determine and document test environment according to software testing requirements 2.3 Build and set up test environment according to software testing requirements
3. Implement and execute test	3.1 Build input data for testing according to software testing requirements 3.2 Create test suite according to software testing requirements 3.3 Execute test cases according to software testing requirements 3.4 Create test record and store test results according to software testing requirements
4. Manage defect and testing process	4.1 Evaluate and document test results according to software testing requirements 4.2 Track, defect and verify fixes and document outcomes

## Foundation Skills

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

<b>SKILL</b>	<b>DESCRIPTION</b>
Oral communication	<ul style="list-style-type: none"> <li>Articulates information and requirements, using effective communication techniques and industry standard technical language intended for audience and environment</li> </ul>
Reading	<ul style="list-style-type: none"> <li>Reviews, and evaluates, technical and business requirements</li> </ul>
Writing	<ul style="list-style-type: none"> <li>Prepares complex workplace documentation detailing processes and outcomes using required structure, layout and technical programming language</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>Takes responsibility for planning, sequencing and prioritising processes, and tasks, to achieve the required outcomes</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>Applies systematic and analytical problem-solving processes, to develop the required security access control strategies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Uses systematic processes, setting goals, gathering required information and identifying and evaluating options against agreed criteria</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Uses a range of digital tools and sophisticated techniques to meet the desired outcomes</li> </ul>

## Unit Mapping Information

Supersedes and is equivalent to ICTPRG529 Apply testing techniques for software development.

## Links

Companion Volume Implementation Guide is found on VETNet -

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