



**Australian Government**

# **ICTPRG537 Implement security for applications**

**Release: 1**

# ICTPRG537 Implement security for applications

## 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 implement security for software applications, including code access security, security access control, cryptographic and secure, input and output handling.

It applies to individuals who work as software developers, software engineers, system and security administrators and testers, and responsible for coding secure software applications.

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. Implement policy-based code-access security	1.1 Identify purpose of application security in software development 1.2 Configure required platform security configuration files using security configuration tools 1.3 Define required restriction custom code access permission and restrict access to protected resources 1.4 Define required access restriction custom code access and run protected operations
2. Implement security access control	2.1 Plan and document authentication and authorisation strategy according to organisational policies and procedures 2.2 Develop and document required application authentication and authorisation strategy

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
3. Write encrypt and decrypt code data	3.1 Determine and document required standard cryptographic algorithms 3.2 Encrypt, and decrypt, data using standard cryptographic algorithms
4. Protect application against injections	4.1 Plan and document secure input and output handling and prevent vulnerabilities related to code injections 4.2 Use secure input and output handling according to task requirements

## 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 requirements and responsibilities distinctively, using effective communication techniques and industry standard technical language intended for audience and environment</li> </ul>
Reading	<ul style="list-style-type: none"> <li>Evaluates complex and varied information, and concepts, in software security</li> </ul>
Writing	<ul style="list-style-type: none"> <li>Prepares technical workplace documents detailing processes and outcomes that fulfil the expectations of different stakeholders</li> <li>Writes and edits computer code, and technical data using correct syntax and logical flow</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> <li>Uses a range of digital tools and sophisticated techniques to meet desired outcomes</li> <li>Is acutely aware of the importance of data security and of monitoring, and controlling, access to digitally stored and transmitted information</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>Uses nuanced knowledge of context to demonstrate knowledge of anomalies and subtle deviations to normal expectations, focusing attention and remedying problems as they arise</li> <li>Applies systematic and analytical problem-solving processes, in order to develop required security access control strategies</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Demonstrates knowledge of principles, concepts, language and practices associated with the digital world</li> </ul>

## Unit Mapping Information

Supersedes and is equivalent to ICTPRG507 Implement security for applications.

## Links

Companion Volume Implementation Guide is found on VETNet -

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