



**Australian Government**

# **ICTPRG507 Implement security for applications**

**Release: 1**

# ICTPRG507 Implement security for applications

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

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

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 in an application | 1.1 Identify the purpose of application security in software development<br>1.2 Configure the platform security configuration files using security configuration tools<br>1.3 Define a custom code access permission, to restrict access to protected resources or to run protected operations |
| 2. Implement security access control in an application           | 2.1 Plan an authentication and authorisation strategy<br>2.2 Develop an appropriate authentication and authorisation                                                                                                                                                                           |

| ELEMENT                                                            | PERFORMANCE CRITERIA                                                                                                                         |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                    | strategy for an application                                                                                                                  |
| 3. Write code to encrypt and decrypt data for secure communication | 3.1 Analyse the standard cryptographic algorithms<br>3.2 Encrypt, and decrypt, data using standard cryptographic algorithms                  |
| 4. Protect an application against injections                       | 4.1 Plan secure input and output handling, to prevent vulnerabilities related to code injections<br>4.2 Use secure input and output handling |

## 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, 3.1                               | <ul style="list-style-type: none"> <li>Evaluates complex and varied information, and concepts, in software security</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Writing           | 1.2, 3.2, 4.2                          | <ul style="list-style-type: none"> <li>Writes and edits computer code, and technical data, ensuring the correct syntax and accuracy</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Get the work done | 1.2, 1.3, 2.1, 2.2, 3.2, 3.1, 4.1, 4.2 | <ul style="list-style-type: none"> <li>Takes responsibility for planning, sequencing and prioritising processes and tasks to achieve the required outcomes</li> <li>Applies systematic and analytical problem-solving processes, in order to develop appropriate security access control strategies</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> |

## Unit Mapping Information

| Code and title<br>current<br>version                   | Code and title<br>previous<br>version                   | Comments                                                    | Equivalence<br>status |
|--------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------|-----------------------|
| ICTPRG507<br>Implement<br>security for<br>applications | ICAPRG507A<br>Implement<br>security for<br>applications | Updated to<br>meet<br>Standards for<br>Training<br>Packages | Equivalent<br>unit    |

## Links

Companion Volume implementation guides are found in VETNet -

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