



**Australian Government**

# **ICTWEB526 Implement and use web services**

**Release: 1**

# ICTWEB526 Implement and use web services

## 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 support web services for building distributed applications.

It applies to individuals working as software developers and apply specialised skills in the consumption of web services, applicable communications protocols and extensible markup language (XML) technologies used in web services.

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

## Unit Sector

Web

## 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. Provide information using XML                 | 1.1 Create XML data structures from various data sources<br>1.2 Manipulate XML data structures using a common application programming interface (API)<br>1.3 Scope elements from multiple XML documents using namespaces<br>1.4 Validate XML data structures using a schema<br>1.5 Map and transform XML document from one schema to another |
| 2. Promote web service using WSDL                | 2.1 Identify purpose and the three main elements of the web service description language (WSDL)<br>2.2 Build WSDL file according to identified purpose<br>2.3 Provide web access to WSDL file via a uniform resource                                                                                                                         |

| ELEMENT                                           | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                   | locator (URL)                                                                                                                                                                                                                                                                                                         |
| 3. Identify purpose of UDDI in using web services | 3.1 Determine purpose of universal description, discovery and integration (UDDI)<br>3.2 Identify and analyse differences between public, extra-enterprise and intra-enterprise UDDI registry deployments<br>3.3 Define relationship between WSDL and UDDI                                                             |
| 4. Access web services using SOAP                 | 4.1 Identify purpose of simple object access protocol (SOAP)<br>4.2 Determine relationship between UDDI and SOAP<br>4.3 Identify basic structure and processing of SOAP messages<br>4.4 Retrieve XML documents from a public web service, using SOAP                                                                  |
| 5. Implement a web service                        | 5.1 Outline a basic web service architecture<br>5.2 Implement, test and publish a web service<br>5.3 Incorporate and test a web service into an application<br>5.4 Confirm web service is functional on different browsers and devices<br>5.5 Seek feedback from required personnel and amend web service as required |

## 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                                                                                                                                                                                                                                                                                           |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reading                 | <ul style="list-style-type: none"><li>Reads and interprets specifications, program data and other documentation from a variety of sources and consolidates information</li></ul>                                                                                                                      |
| Writing                 | <ul style="list-style-type: none"><li>Transforms and writes technical data in a logical manner using required language and protocols</li><li>Develops specifications and applicable workplace documentation for specific audiences using applicable language to convey explicit information</li></ul> |
| Planning and organising | <ul style="list-style-type: none"><li>Accepts responsibility for planning and sequencing complex tasks and workload</li><li>Negotiates key aspects with others, including required capabilities, efficiencies and effectiveness</li></ul>                                                             |
| Problem solving         | <ul style="list-style-type: none"><li>Makes critical decisions quickly and intuitively in complex situations, taking into consideration a range of variables, including outcomes of</li></ul>                                                                                                         |

| SKILL      | DESCRIPTION                                                                                                                                                                                                                                                                                                                                             |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <ul style="list-style-type: none"><li>previous decisions</li><li>• Applies systematic and analytical decision-making processes, for complex situations</li></ul>                                                                                                                                                                                        |
| Technology | <ul style="list-style-type: none"><li>• Confirms knowledge of computing technologies is kept up to date in order to provide and carry out activities</li><li>• Uses and investigates new digital technologies and applications</li><li>• Manages and manipulates data and communicates with others in a secure and stable digital environment</li></ul> |

## Unit Mapping Information

Supersedes and is equivalent to ICTWEB515 Implement and use web services.

## Links

Companion Volume Implementation Guide is found on VETNet -

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