



Australian Government

ICTWEB515 Implement and use web services

Release: 1

ICTWEB515 Implement and use web services

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 support web services for building distributed applications.

It applies to individuals working as software developers who have specialised skills in the consumption of web services, related communications protocols and the associated 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. Use XML to provide information	1.1 Create XML data structures from various data sources 1.2 Manipulate XML data structures, using a common application programming interface (API) 1.3 Use namespaces to scope elements from multiple XML documents 1.4 Validate XML data structures, using a schema 1.5 Map, and transform, an XML document from one schema to another
2. Use WSDL to promote	2.1 Understand the purpose of the web service description

ELEMENT	PERFORMANCE CRITERIA
a web service	language (WSDL) 2.2 Identify the three main elements that comprise WSDL 2.3 Build a WSDL file 2.4 Provide web access to a WSDL file, via a uniform resource locator (URL)
3. Use UDDI to locate and retrieve information about a public web service	3.1 Identify the purpose of universal description, discovery and integration (UDDI) 3.2 Understand the differences between public, extra-enterprise and intra-enterprise, UDDI registry deployments 3.3 Locate, and retrieve information, about a public web service using UDDI 3.4 Identify the relationship between WSDL and UDDI
4. Access the web services using SOAP	4.1 Identify the purpose of simple object access protocol (SOAP) 4.2 Determine the relationship between UDDI and SOAP 4.3 Identify the basic structure and processing of a SOAP message 4.4 Retrieve an XML document from a public web service, using SOAP
5. Implement a web service	5.1 Outline a basic web service architecture 5.2 Implement, test and publish a web service 5.3 Incorporate and test a web service into an application

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, 1.3-1.5, 2.2, 3.1, 3.3, 3.4, 4.1-4.3	Reads and interprets specifications, computer program data, and other documentation, from a variety of sources, and consolidates information to determine requirements
Writing	1.1-1.5, 2.3, 2.4, 4.3, 4.4, 5.1, 5.2	Develops clear and well-organised specifications, and related workplace documentation, for specific audiences using the appropriate language to convey explicit information

Navigate the world of work	2.1, 3.2, 4.2	Ensures that knowledge of computing technologies is kept up to date in order to provide, and carry out, activities
Get the work done	1.2, 2.1, 2.4, 3.3, 4.4, 5.1-5.3	- Accepts responsibility for planning and sequencing complex tasks and workload, negotiating key aspects with others, and taking into account capabilities, efficiencies and effectiveness - Makes critical decisions quickly and intuitively in complex situations, taking into consideration a range of variables, including the outcomes of previous decisions - Applies systematic and analytical decision-making processes, for complex and non-routine situations - Uses and investigates new digital technologies and applications, to manage and manipulate data, and to communicate effectively with others, in a secure and stable digital environment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTWEB515 Implement and use web services	ICAWEB515A Implement and use web services	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for ICTWEB515 Implement and use web services

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Performance Evidence

Evidence of the ability to:

- transform data from relational or other native data sources, into an extensible markup language (XML)
- validate an XML document, using a predefined schema
- provide access to the business functionality via a web service description language (WSDL) file
- locate a public web service business function, and include it in a website, using universal description, discovery and integration (UDDI), and a simple object access protocol (SOAP)
- implement a web service according to the business requirements, specifications, and industry standards.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- summarise integrated development environments
- summarise web development technologies
- outline the web service architecture
- describe the importance of XML language and data structures.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the website technologies field of work, and include access to:

- the web service business requirement specifications
- industry standards published by the World Wide Web Consortium (W3C)
- platform-specific documentation and help files, describing the syntax and use of proprietary technologies
- a simulated development environment, incorporating the following elements:
 - a relational database server
 - the integrated development environment (IDE), including related frameworks, APIs and associated proprietary classes, required to implement web services and their enabling technologies
 - a web server
 - web browsers
 - XML editors
 - XPath testing utilities.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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