



Australian Government

ICTPRG604 Create cloud computing services

Release: 1

ICTPRG604 Create cloud computing 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 design, build, test and deploy web services and cloud computing applications to specifications.

It applies to individuals, in computer programmer roles, with the information and communications technology (ICT) skills required to create and install web services and cloud computing 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. Design web service or cloud computing application	1.1 Gather requirements for the web service or cloud computing application 1.2 Determine the development environment and tools required to create web service or cloud computing application 1.3 Identify any possible big data applications 1.4 Define architecture and framework
2. Build web service	2.1 Itemise required functionality 2.2 Build web service in the determined environment to meet required functionality

ELEMENT	PERFORMANCE CRITERIA
3. Build cloud computing application	3.1 Determine required functionality 3.2 Build cloud computing application in the determined environment to meet the required functionality
4. Test web service or cloud computing application	4.1 Test web service or cloud computing application for overall functionality according to requirements 4.2 Iterate design or build until test results meet requirements
5. Deploy web service or cloud computing application	5.1 Deploy web service or cloud computing application to the specified environment 5.2 Publish web service or cloud computing application to the specified environment

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, 1.2, 3.1, 4.1	Recognises and interprets complex technical and operational documentation to determine and confirm job requirements
Writing	1.3, 1.4, 2.1, 3.2, 4.2, 5.1, 5.2	- Develops complex documentation in required formats using clear and detailed language to convey explicit information, requirements and recommendations - Writes and edits computer code and technical data ensuring correct syntax
Oral Communication	1.1	- Uses listening and questioning skills to confirm understanding for requirements - Articulates technically complex concepts and operational and business-related matters using specific and relevant language suitable to audience
Get the work done	1.1, 1.2, 1.3, 1.4, 2.2, 3.1, 3.2, 4.1, 4.2, 5.1, 5.2	- Demonstrates a sophisticated understanding of principles, concepts, language and practices associated with the digital world and uses these to troubleshoot and understands the uses and potential of new technology - Uses a broad range of strategies to store, access and organise virtual information recognising that design

		choices will influence what information is retrieved and how it may be interpreted and used • Is acutely aware of the importance of understanding, monitoring and controlling access to digitally stored and transmitted information • Uses a mix of intuitive and formal processes to identify key information and issues, evaluate alternative strategies, anticipate consequences and consider implementation issues and contingencies • Uses understanding of context to address common problems in operating a web service or cloud computing application and performs basic debugging when required
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTPRG604 Create cloud computing services	ICAPRG603A Create cloud computing services	Updated to meet Standards for Training Packages. Recoded and minor changes to PCs to meet AQF requirements.	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 ICTPRG604 Create cloud computing services

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Performance Evidence

Evidence of the ability to:

- design, build, test and deploy a web service to specification that can be accessed and used from a separate web application
- design, build, test and deploy a cloud computing application to specification that can be accessed from a variety of portals
- document the completed development.

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:

- identify and describe the development tools required to produce services deployable through cloud computing
- summarise the internet infrastructure necessary for cloud computing
- describe object-oriented programming and its application to cloud computing
- describe database access and manipulation on the web using:
 - hypertext markup language (HTML)
 - eXtensible markup language (XML)
- describe the term “big data” and explain its relevance to cloud computing.

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 should be typical of those experienced in the programming and software development industry and include access to:

- specific requirements, including client and functionality requirements
- integrated development environment (IDE) for the determined language
- the database server with tools to access data source and develop queries
- the web server for the determined environment
- the internet and a web browser.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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