



Australian Government

ICTPRG614 Create cloud computing services

Release: 1

ICTPRG614 Create cloud computing 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 design, build, test and deploy web services and cloud computing applications to specifications.

It applies to individuals in software engineering 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 and cloud computing application	1.1 Identify web service and cloud computing application requirements 1.2 Determine development environment and tools required to create web service and cloud computing application 1.3 Define required web service and cloud computing application architecture and framework
2. Build web service and cloud computing application	2.1 Determine required web service functionality 2.2 Build and develop required web service 2.3 Determine required cloud application requirements 2.4 Build cloud computing application in determined environment to meet required functionality

ELEMENT	PERFORMANCE CRITERIA
3. Test web service and cloud computing application	3.1 Test web service functionality according to technical specifications 3.2 Test cloud computing functionality according to technical specifications 3.3 Seek and respond to feedback from required personnel
4. Deploy web service and cloud computing application	4.1 Deploy web service and cloud computing application to required environment 4.2 Document work and submit and obtain sign off from required personnel 4.3 Seek and respond to feedback from required personnel 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	Interprets complex technical and operational documentation to determine and confirm job requirements
Writing	- Prepares complex documentation conveying completed developments using detailed language - Writes and edits code and technical data in a logical manner using required syntax and language
Oral Communication	Uses listening and questioning techniques to confirm requirements and articulate complex concepts and matters using relevant industry for intended audience
Self-management	- Demonstrates a sophisticated knowledge of principles, concepts, language and practices associated with the digital world and uses them to troubleshoot and understand the uses and potential of new technology - Demonstrates knowledge of the importance of monitoring and controlling access to digitally stored and transmitted information
Planning and organising	Uses a broad range of strategies to store, access and organise virtual information and demonstrates the knowledge that design choices will influence what information is retrieved and how it is interpreted and used
Problem solving	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

SKILL	DESCRIPTION
	• Uses knowledge of context to address common problems in operating a web service and a cloud computing application and performs basic debugging when required

Unit Mapping Information

Supersedes and is equivalent to ICTPRG604 Create cloud computing services.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for ICTPRG614 Create cloud computing services

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, and to:

- design, build, test and deploy
 - at least one web service to specification that can be accessed and used from a separate web application
 - at least one cloud computing application to specification that can be accessed from different portals.

In the course of the above, the candidate must:

- document completed developments.

Knowledge Evidence

The candidate must demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit. This includes knowledge of:

- agile methodology to design, build, test and deploy web services and cloud computing applications, including for:
 - determining user needs and required functionality of web services and cloud computing application
 - developing uptime strategy for designed services
- characteristics of current and emerging cloud delivery models
- development tools required to produce services deployable through cloud computing
- internet infrastructure necessary for cloud computing
- object-oriented programming and its application to cloud computing
- required languages for database access and manipulation on web.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- client and functionality requirement
- integrated development environment (IDE) for determined language
- database server with tools to access data source and develop queries
- web server for determined environment in performance evidence
- internet and web browser.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

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