



Australian Government

Assessment Requirements for ICTCLD503 Implement web-scale cloud infrastructure

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

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 at least one architecture that will scale networking, compute and storage for a multi-tier web application
- design at least one microservice architecture for implementing a simple web application
- deploy a microservice application utilising cloud serverless technologies.

In the course of the above, the candidate must:

- use cloud management consoles, software development kits or command line tools
- apply web-scaling principles and technologies.

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:

- industry technology standards used in cloud computing solutions and services
- industry standard hardware and software products, their general features, capabilities and application, including storage technology
- functions, benefits and differences of web-scale cloud components, including:
 - structured query language (SQL) and NoSQL databases
 - monolithic and microservice architectures
 - virtual, container and serverless compute models
 - content delivery networks and in-memory data stores
- definitions, functions, features and uses of web-scale cloud infrastructure, including:
 - highly cohesive and loosely coupled systems
 - database and storage services for persistent data storage
 - application program interface (API), messaging and queuing services

- testing and debugging techniques
- web-scaling principles and technologies.

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:

- cloud vendor service provider
- cloud managed database service
- cloud serverless environment
- pre-prepared code elements for microservice deployment
- information and data sources required to design and implement cloud infrastructure
- integrated development environment (IDE)
- specific requirements and industry standards, organisational procedures and legislative requirements, including business and functionality requirements, as required
- internet and web browser
- data to gather information from to determine output and user requirements, including user access and business protocols.

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 -

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