



Australian Government

Assessment Requirements for ICTCLD511

Protect cloud infrastructure and data

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with the Information and Communications Technology Training Package Version 8.0. Newly created unit of competency to address in-demand skills needs.

Performance Evidence

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

- configure at least three network controls to protect a web-based application running in a cloud environment, which must include at least one of the following types of controls:
 - web application firewall
 - content delivery network
 - load balancer
 - network access control lists
 - host-based firewalls
- generate and securely manage at least one encryption key used to encrypt data at rest in the cloud
- implement at least one data loss prevention (DLP) system to identify and provide visibility to sensitive data

In the course of the above, the candidate must:

- use cloud management console, cloud software development kits and command line tools
- collect and analyse cloud data and adjust resources as required
- consider procedural improvements to produce repeatable and automated deployments by reducing manual processes
- report unusual cloud-based activities within required timeframes
- apply legislative requirements; governance, risk and compliance (GRC) measures; and organisational policies and procedures.

Knowledge Evidence

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

- functions and features of GRC measures
- methods to create and defend network layers between resources, including:
 - distributed denial of service (DDoS) protection
 - content distribution networks (CDNs)
- types of network security controls to manage inbound and outbound network traffic and service endpoints
- functions and features of firewalls
- common processes to harden virtual machine images and containers prior to deployment
- common processes to manage vulnerabilities of live resources through patching and configuration rules
- common patterns and services to minimise interactive access to compute resources, including bastion hosts
- common types and key characteristics of sensitive and regulated data
- functions and capabilities of data loss protection (DLP) systems
- methods to implement attribute-based access controls (ABACs) for different data classifications
- data retention policies and how they can be implemented
- methods for managing encryption keys generated by cloud providers
- storage services that support encryption at rest and how this can be monitored and enforced
- services for tracking and auditing access to sensitive data and encryption keys
- secure certificate management and deployment on external network resources, including CDNs, load balancers and application programming interface (API) gateways
- methods to configure networks and application to enforce data encryption in transit
- methods to conduct risk assessments and compliance assessments
- organisational policies and procedures, and legislative requirements relating to work tasks.

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 infrastructure and data that must be protected
- required software and hardware to configure cloud systems
- work brief, resources, and organisational policies and procedures required to demonstrate the performance evidence.

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>