



Australian Government

ICTCLD508 Manage infrastructure in cloud environments

Release: 1

ICTCLD508 Manage infrastructure in cloud environments

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 configure, monitor, maintain and update resources running in a cloud environment.

It applies to cloud engineers, cloud systems administrators and those who work within cloud computing environments and responsible for the day-to-day running of cloud resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Cloud computing

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to manage cloud resources	1.1 Determine complex cloud computing technology resources according to business requirements, needs and cloud environment 1.2 Identify and confirm business purpose, use and plan of different cloud resources according to business needs and efficiencies
2. Inventory and change management of cloud resources	2.1 Identify tagging policy and categorise resources according to business needs 2.2 Update resources according to tagging policy and build and maintain inventory of cloud resources 2.3 Generate report of resources based on category 2.4 Conduct maintenance with resources in specific category 2.5 Document resource tagging and inventory management

ELEMENTS	PERFORMANCE CRITERIA
	according to business needs
3. Audit and change management of cloud resources	3.1 Identify configuration policy for cloud resources according to business needs 3.2 Enable logging of cloud-based events 3.3 Collect and track changes to cloud resource configuration 3.4 Apply configuration policy to resource and alert for non-conformance 3.5 Utilise audit logs and determine details and changes from configuration 3.6 Document cloud audit and change management configuration
4. Monitoring, logging and alarming	4.1 Define capacity limits for cloud resources according to business needs 4.2 Configure metrics and alarm when limits are exceeded 4.3 Capture and store resource and system logs 4.4 Test capacity to trigger alarms and review logs of incident 4.5 Manage capacity of resource to remove alarm 4.6 Document run book for actions according to configured alarm
5. Manage storage lifecycle	5.1 Identify data retention policy according to business needs and cloud resource 5.2 Configure storage to automatically comply with retention policy 5.3 Confirm that retention policy is applied to target storage 5.4 Document storage configuration according to business needs
6. Monitor and track complex cloud resources	6.1 Document mechanisms to automate tasks as required 6.2 Finalise user documentation and submit to 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
Numeracy	Analyses and synthesises highly embedded mathematical information in a broad range of tasks and texts

SKILL	DESCRIPTION
Reading	Organises, evaluates and critiques ideas and information from a range of complex texts
Writing	Prepares complex documentation detailing analysis, work performed and results using succinct language and logical structure
Planning and organising	- Identifies the key factors that impact on decisions and their outcomes, drawing on experience, competing priorities, and decision-making strategies, where appropriate - Plans strategic priorities and outcomes within a flexible, efficient and effective context, in a diverse environment exposed to competing demands
Self-management	Develops and implements strategies that confirms that the organisational policies, procedures and regulatory requirements are being met

Unit Mapping Information

No equivalent unit. New unit.

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 ICTCLD508 Manage infrastructure in cloud environments

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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:

- monitor and manage inventory, changes and lifecycle of at least one cloud resource.

In the course of the above, the candidate must:

- use cloud management console, cloud software development kits or command line tools
- collect and analyse cloud and system data and adjust resources accordingly
- summarise ways system operations in cloud environments can be automated to minimise manual intervention.

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 applications
- purpose, benefits and features of cloud services that enable:
 - resource inventory and change management
 - performance, capacity and availability monitoring and alerting
 - snapshots and backups
 - user, service and resource permissions
 - access management, monitoring and auditing
 - system patching and update services
 - security mechanisms
- repeatable and automated maintenance of cloud resources with:
 - console-based management services

- software development kits
- command line tools.

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
- 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 well as retention/lifecycle business policy, as required
- retention/lifecycle policy example as it relates to managing cloud infrastructure
- 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.

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