



Australian Government

ICAICT423A Select cloud storage strategies

Release 1

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Modification History

Release	Comments
Release 1	This version first released with ICA11 Information and Communications Technology Version 2.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to analyse business requirements and select the best strategies to provide a cloud storage solution.

Application of the Unit

This unit applies to those engaged in developing a cloud storage strategy for an enterprise.

Licensing/Regulatory Information

Users should confirm licensing, legislative, regulatory, or certification requirements with the relevant federal, state or territory authority.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Plan for the implementation of a cloud storage solution	1.1. Review business requirements and identify enterprise standards 1.2. Review major characteristics relating to cloud storage and identify advantages and disadvantages of its use 1.3. Review suitability of big data in the cloud storage solution
2. Select strategies for implementing cloud storage solutions	2.1. Research and review major cloud storage applications to determine possible cloud storage business needs 2.2. Identify most relevant business functions for cloud storage deployment 2.3. Evaluate possible providers of cloud storage solutions 2.4. Review service level agreements (SLAs) and identify hidden costs 2.5. Develop a cloud storage strategy according to identified business data deliverables.
3. Evaluate effectiveness of cloud storage	3.1. Review and evaluate the cloud storage technologies for performance, usability and benefit to enterprise 3.2. Document and action required improvements

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

communication skills to:

- communicate with peers and supervisors in relevant cloud computing technological areas
- seek assistance and expert advice from relevant people in cloud computing industry area
- literacy skills to interpret technical documentation, equipment manuals and specifications
- research skills to locate appropriate sources of information regarding cloud storage technologies
- analytical skills to analyse and evaluate features of cloud storage technology
- safety awareness skills to work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- technical skills to:
 - identify features of cloud storage technologies
 - test and evaluate cloud storage technologies

Required knowledge

- current trends and directions in information and communications technology (ICT), and major industry technology standards used in cloud storage services
- vendor product directions in cloud storage services
- current industry hardware and software products, and their general features, capabilities and application, especially where applied to cloud storage technologies

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: - review benefits and challenges associated with implementing a cloud storage solution - determine most appropriate cloud storage solutions for the enterprise and effective strategies for their implementation - review implementation of a cloud storage strategy and identify areas for improvement.
Context of and specific resources for assessment	Assessment must ensure access to: - site where cloud storage technologies may be used - cloud storage technologies currently used in industry - SLA documentation relevant to cloud storage scenarios - documentation detailing work health and safety (WHS) standards, environmental guidelines and enterprise requirements - modified equipment for people with special needs.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: - verbal or written questioning to assess candidate's knowledge of features and functions of industry-specific cloud technologies - direct observation of candidate using industry-specific cloud technologies - simulation of uses of industry-specific cloud technologies.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate. Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed. Indigenous people and other people from a non-English speaking background may need additional support. In cases where practical assessment is used it should be

	combined with targeted questioning to assess required knowledge.
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Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Business requirements</i> may include:	• data conversion requirements • hardware and software requirements • interface requirements • operational requirements • user requirements.
<i>Characteristics</i> may include:	• data centre hosting • multiple physical locations • networked online storage • virtualisation use.
<i>Advantages</i> may include:	• ability to provide security through local machine duplication • ability to off load storage maintenance tasks, such as: • backup • disaster recovery • data replication • hardware purchases • access to a wider variety of web services to support the enterprise • anywhere any time access • pay-as-you-use storage costs • provides the option of off-premises or on-premises storage or a combination of both.
<i>Disadvantages</i> may include:	• accessibility: • bandwidth-dependent for access • compliance: • service provider's legislative requirements may not be compliant with local legislative requirements • data sensitivity: • data more easily compromised • security:

	• chance of piracy • distributed data – access available at more physical locations • greater chance of virus attack • greater number of people with physical access • supplier stability: • vulnerability to bankruptcy • purchased by competitive company • purchased by legally non-compliant company.
Big data may include:	• data access that incorporates high volume, high velocity and a high variety of information with fast in-depth processing • data managed by large information management specialist companies using big data technologies, such as Software AG, Oracle, IBM, Microsoft, SAP, EMC, and HP • data that is distributed within the cloud across a wide number of database servers.
Cloud storage applications may include a wide variety of key consumer applications:	• digital photography: • Flickr • Picasa • Office applications: • Google Docs • social networking: • Facebook • MySpace • storage services: • MediaMax • Strongspace • Xdrive • video: • YouTube • web email: • Gmail • Hotmail • Yahoo • website hosting: • GoDaddy • HostMonster • StartLogic.
Service level agreements may	• cloud storage SLAs focused on the characteristics of the data centre and cloud network:

include:	• data throughput • jitter disturbance • mean time between failures • mean time to recovery • mean time to repair • various data rates.
<i>Hidden costs</i> may include:	• costs besides basic monthly costs per gigabyte, such as: • copying and deleting files • costs for internet connections • data transfers • metadata functions.

Unit Sector(s)

General ICT