



Australian Government

ICANWK306A Evaluate characteristics of cloud computing solutions and services

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 develop an understanding of cloud computing characteristics in order to evaluate them. It involves a basic review and analysis of cloud computing delivery and deployment models and an evaluation of the benefits and challenges of implementing cloud computing solutions and services.

Application of the Unit

This unit applies to those engaged in reviewing a cloud computing solution 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

<p><i>Elements describe the essential outcomes of a unit of competency.</i></p>	<p><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></p>
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Elements and Performance Criteria

<p>1. Prepare to review cloud technology solutions and services</p>	<p>1.1. Identify <i>common terminology, characteristics and concepts</i> of cloud computing solutions and services</p> <p>1.2. Identify <i>major organisational roles</i> affected by cloud computing solutions and services</p> <p>1.3. Identify <i>key business requirements</i> most suitable for transferring to cloud computing solutions and services</p>
<p>2. Identify differences between cloud delivery models</p>	<p>2.1. Identify characteristics associated with the different <i>cloud delivery models</i></p> <p>2.2. Identify any other emerging cloud delivery models</p> <p>2.3. Evaluate advantages and disadvantages of combining different cloud delivery models</p>
<p>3. Review performance of different types of cloud deployment models</p>	<p>3.1. Identify characteristics associated with different <i>cloud deployment models</i></p> <p>3.2. Identify any other emerging cloud deployment models</p> <p>3.3. Evaluate advantages and disadvantages of combining different deployment models</p>
<p>4. Evaluate benefits and challenges of using cloud computing solutions and services</p>	<p>4.1. Identify possible benefits of adopting cloud solutions and services</p> <p>4.2. Identify possible challenges of adopting cloud solutions and services</p> <p>4.3. Review and document the impact of implementing a cloud delivery model</p> <p>4.4. Provide feedback to <i>appropriate personnel</i></p>

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 the cloud computing industry area
- literacy and numeracy skills to interpret technical documentation, equipment manuals and specifications
- research skills to locate appropriate sources of information regarding cloud computing solutions
- technical skills to:
 - identify features of cloud computing solutions and services
 - test and evaluate cloud computing solutions and services

Required knowledge

- current technology trends and directions in information and communications technology (ICT), and major industry technology standards used in cloud computing solutions and services
- vendor product directions in cloud computing solutions and services
- current industry hardware and software products, and their general features, capabilities and application, especially where applied to cloud computing solutions and 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	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> • determine the most appropriate cloud computing solution for the business • provide feedback on the most appropriate cloud computing solution and service.
Context of and specific resources for assessment	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> • information on cloud computing solution technologies currently used in industry • business requirements • documents detailing work health and safety (WHS) standards, environmental guidelines and enterprise requirements • modified equipment for people with special needs.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • verbal or written questioning to assess candidate's knowledge of features and functions of cloud computing industry-specific technologies • presentation on the use of cloud computing industry-specific technologies by industry • report outlining the most appropriate use of cloud computing technologies for a business.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate.</p> <p>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.</p> <p>Indigenous people and other people from a non-English speaking background may need additional support.</p> <p>In cases where practical assessment is used it should be combined with targeted questioning to assess required knowledge.</p>

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.

<p><i>Common terminology, characteristics and concepts</i> may include:</p>	<ul style="list-style-type: none"> • cloud service: <ul style="list-style-type: none"> • delivery models • deployment models • elasticity • measured usage • multi-tenancy • on-demand usage • resilient computing • scaling: <ul style="list-style-type: none"> • horizontal • vertical • ubiquitous access • virtualisation.
<p><i>Major organisational roles</i> may include:</p>	<ul style="list-style-type: none"> • cloud provider • cloud resource administrator • cloud service owner.
<p><i>Key business requirements</i> may include:</p>	<ul style="list-style-type: none"> • data conversion requirements • hardware and software requirements • interface requirements • operational requirements • user requirements.
<p><i>Cloud delivery models</i> may include:</p>	<ul style="list-style-type: none"> • infrastructure as a service (IaaS) • platform as a service (PaaS) • software as a service (SaaS).
<p><i>Cloud deployment models</i> may include:</p>	<ul style="list-style-type: none"> • community cloud • hybrid cloud • private cloud • public cloud.
<p><i>Appropriate personnel</i> may include:</p>	<ul style="list-style-type: none"> • authorised business representative • client • supervisor.

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Unit Sector(s)

Networking