



Australian Government

Department of Education, Employment and Workplace Relations

ICADBS407A Monitor physical database implementation

Release: 1

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Modification History

Release	Comments
Release 1	This Unit first released with <i>ICA11 Information and Communications Technology Training Package version 1.0</i>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to monitor database performance using database-management system modelling.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

Application of the Unit

This unit applies to database support staff who are required to test and scrutinise the operation of a physical database to ensure that it functions as efficiently as possible.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	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. Undertake database management system modelling	1.1 Review database prototype, as appropriate, to determine acceptance criteria and performance standards 1.2 Load test data according to the technical sequence detailed in documentation 1.3 Generate a test schedule for the database of tasks to be performed and results expected
2. Monitor database performance	2.1 Evaluate database performance against acceptance criteria and performance standards 2.2 Identify discrepancies in results when expected outcomes do not meet acceptance criteria 2.3 Identify areas needing enhancement and document changes to be made 2.4 Modify database according to project standards 2.5 Repeat performance testing until expected results are achieved
3. Seek client feedback and sign-off	3.1 Present test results in a document and provide to client for feedback 3.2 Incorporate client change requests as appropriate 3.3 Obtain client sign-off of the monitoring process

Required Skills and Knowledge

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

Required skills

- analytical skills to review database prototype and evaluate performance
- communication skills to liaise with client
- literacy skills to:
 - evaluate technical data
 - present and document feedback
- problem-solving skills to provide a range of technical solutions
- technical skills to use database software.

Required knowledge

- client business domain
- current industry-accepted hardware and software products
- database design
- database performance standards
- quality assurance practices
- testing and benchmarking processes
- three or more current principles of databases.

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: • identify technical considerations affecting implementation of a database • analyse performance issues during implementation of the database.
Context of and specific resources for assessment	Assessment must ensure access to: • database management system (DBMS) • target database prototype • testing and benchmarking software • appropriate learning and assessment support when required • 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 database performance testing • review of candidate's test schedule that documents evidence of discrepancies • evaluation of candidate's documented test results.
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.

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.

Database may include:	• commercial off-the-shelf (COTS) database packages • object-relational databases • proprietary databases • relational databases.
Acceptance criteria may include:	• cost implications • technical and logistical considerations • timeframe.
Documentation may follow:	• audit trails • client training • International Organization for Standardization (ISO), International Electrotechnical Commission (IEC) and Australian Standards (AS) standards • maintaining equipment inventory • naming standards • project-management templates and report writing • satisfaction reports • version control.
Tasks may include:	• activities • function • job • work.
Client may include:	• external organisations • individuals • internal departments • internal employees.

Unit Sector(s)

Database