



Australian Government

Department of Education, Employment and Workplace Relations

ICAB4061B Monitor physical database implementation

Release: 1

ICAB4061B Monitor physical database implementation

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit defines the competency required to monitor database performance using database management system modeling. The following units are linked and form an appropriate cluster: • ICAB4060B Identify physical database requirements • ICAS4113C Identify and resolve common database performance problems No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		
	ICAS4125B	Monitor and administer a database

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Undertake database management system modeling	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 where 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 signoff	3.1. Present test results in a document and provide to client for feedback 3.2. Incorporate client change requests as appropriate 3.3. Seek client sign-off of the monitoring process

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- General knowledge of database performance standards
- Conduct of performance reviews
- Problem solving skills for a defined range of unpredictable problems involving participation in the development of technical solutions

Required knowledge

- Broad knowledge of three or more current principles of databases
- Current industry-accepted hardware and software products, with broad knowledge of general features and capabilities and detailed knowledge in some areas

REQUIRED SKILLS AND KNOWLEDGE

- Broad knowledge of database design
- Broad knowledge of quality assurance practices
- Broad general knowledge of the client business domain
- Testing and benchmarking processes

Evidence Guide

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 following is essential:

- Assessment must confirm the ability to identify technical considerations affecting implementation of the database and the ability to analyse performance issues during implementation of the database.

To demonstrate competency in this unit the person will require access to:

- Client requirements
- Project deliverables
- Acceptance criteria
- Security system plan
- Technical specifications
- Business analysis process outcomes

Context of and specific resources for assessment

The breadth, depth and complexity of knowledge and skills in this competency would cover a broad range of varied activities or application in a wider variety of contexts most of which are complex and non-routine. Leadership and guidance would be involved when organising activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Assessment must ensure:

- Performance of a broad range of skilled applications including the requirement to evaluate and analyse current practices, develop new criteria and procedures for performing current practices and provision of some leadership and guidance to others in the application and planning of the skills would be characteristic.
- Applications may involve responsibility for, and

EVIDENCE GUIDE	
	limited organisation of, others.
Method of assessment	The purpose of this unit is to define the standard of performance to be achieved in the workplace. In undertaking training and assessment activities related to this unit, consideration should be given to the implementation of appropriate diversity and accessibility practices in order to accommodate people who may have special needs. Additional guidance on these and related matters is provided in ICA05 Section 1. - Competency in this unit should be assessed using summative assessment to ensure consistency of performance in a range of contexts. This unit can be assessed either in the workplace or in a simulated environment. However, simulated activities must closely reflect the workplace to enable full demonstration of competency. - Assessment will usually include observation of real or simulated work processes and procedures and/or performance in a project context as well as questioning on underpinning knowledge and skills. The questioning of team members, supervisors, subordinates, peers and clients where appropriate may provide valuable input to the assessment process. The interdependence of units for assessment purposes may vary with the particular project or scenario.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: - ICAB4060B Identify physical database requirements - ICAS4113C Identify and resolve common database performance problems An individual demonstrating this competency would be able to: - Demonstrate understanding of a broad knowledge base incorporating some theoretical concepts - Apply solutions to a defined range of unpredictable problems

EVIDENCE GUIDE

	• Identify and apply skill and knowledge areas to a wide variety of contexts, with depth in some areas • Identify, analyse and evaluate information from a variety of sources • Take responsibility for own outputs in relation to specified quality standards • Take limited responsibility for the quantity and quality of the output of others • Maintain knowledge of industry products and services
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Range Statement**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.

Documentation may follow:

- ISO/IEC/AS standards
- audit trails
- naming standards
- version control
- project management templates and report writing
- maintaining equipment inventory
- client training
- satisfaction reports

Database may include but are not limited to:

- relational databases
- object-relational databases
- proprietary databases
- commercial off-the-shelf (COTS) database packages

Client may include but are not limited to:

- internal departments
- external organisations
- clubs
- individual people

RANGE STATEMENT	
	• internal employees
Acceptance criteria may include:	• timeframe • cost implications • technical and logistical considerations
Tasks may include but are not limited to:	• work • activities • function • job

Unit Sector(s)

Unit sector	Build
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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