



Australian Government

ICTDBS409 Monitor and administer a database

Release: 1

ICTDBS409 Monitor and administer a database

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to manage databases including start up, operation, testing, monitoring and maintenance, in accordance with organisational requirements.

It applies to individuals employed as database support staff who are required to maintain a database, monitor its performance and access, as well as to administer its security.

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

Unit Sector

Database

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Start up a database	1.1 Configure the system for a database start-up 1.2 Monitor the database start-up and operation for irregularities
2. Manage the database	2.1 Take action to ensure that a data dictionary has been compiled and that data structures are in place 2.2 Maintain data integrity constraints, according to business requirements 2.3 Create and design indexes, and multiple-field keys, according to business requirements 2.4 Monitor the locking options chosen for the database

ELEMENT	PERFORMANCE CRITERIA
	2.5 Confirm that recent backups of the database have been stored, and that backups can be retrieved as a full working copy 2.6 Monitor data storage space for ongoing viability, and resize as needed 2.7 Update the data according to organisational guidelines
3. Manage database access	3.1 Allocate or remove access privileges according to user status 3.2 Monitor network server log-in log file for illegal log-in attempts, or for security breaches 3.3 Manage system resources in the context of database administration
4. Document database maintenance tasks	4.1 Document changes to database start-up procedures 4.2 Itemise database management structures 4.3 File authorisations for access changes 4.4 Detail the procedures for monitoring log files 4.5 Record the procedures to manage systems resources

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.2, 2.5, 3.2	Analyses textual information to determine start-up and operation irregularities
Writing	2.7, 4.1, 4.2, 4.4, 4.5	Uses appropriate language and required format for updating data, and presenting information in technical and business documents
Oral Communication	2.5, 3.1	Uses active listening and questioning skills when determining status of periodic tasks and activities
Navigate the world of work	2.7	Follows organisational requirements for updating data
Get the work done	All	Monitors actions against stated goals during compilation of data dictionary and data structures,

		and when managing a database, according to business requirements • Uses a formal decision-making process, setting or clarifying goals, gathering information, and identifying, and evaluating several choices against a limited set of criteria • Understands key principles and concepts underpinning the design, and operation of digital systems and tools
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTDBS409 Monitor and administer a database	ICADBS409A Monitor and administer a database	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTDBS409 Monitor and administer a database

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Performance Evidence

Evidence of the ability to:

- configure a database start-up
- confirm data integrity
- monitor data storage requirements for database
- update data
- update database access.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline backup and recovery methodologies
- explain the architectural design of relational databases
- explain the concept of database security
- outline the process involved in the selection and use of appropriate database management tools
- explain the principles of structured query language (SQL)
- outline the tasks involved in database administration
- outline the tuning methodologies.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the database field of work, and include access to:

- industry software packages

- a live database, preferably on a local area network (LAN) on which there is a server that offers log-in functionality.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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