



Australian Government

ICTDBS418 Monitor and administer databases

Release: 1

ICTDBS418 Monitor and administer databases

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to monitor and manage databases including selecting the required database according to organisational requirements. It involves the operation, testing, monitoring and maintenance of a database, in accordance with organisational requirements.

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

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. Select and start database	1.1 Identify and select database according to organisational requirements 1.2 Configure database system start-up according to organisational requirements and required vendor guidelines 1.3 Monitor database start-up and operation and check for irregularities according to task requirements
2. Administer database	2.1 Create and document data dictionary and implement data structures according to task requirements 2.2 Maintain data integrity constraints according to organisational requirements

ELEMENT	PERFORMANCE CRITERIA
	2.3 Create and design indexes, locking options and multiple-field keys according to organisational requirements 2.4 Confirm database backups have been stored and can be accessed by required personnel 2.5 Monitor and update ongoing viability of data storage and resize according to organisational requirements
3. Manage database access	3.1 Allocate and remove access privileges according to user status and organisational requirements 3.2 Monitor network server log-in log file and prevent illegal log-in attempts and security breaches according to organisational policies and procedures 3.3 Manage system and database administration resources according to task requirements
4. Record and store database maintenance tasks	4.1 Document changes to database processes and start-up procedures according to organisational requirements 4.2 Itemise database management structures and file access authorisations 4.3 Detail required log file monitoring procedures 4.4 Record the procedures to manage systems resources 4.5 Save, back-up and close documentation and database resources

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Oral communication	• Uses active listening and questioning skills to confirm information and task requirements
Reading	• Analyses textual information to determine start-up and operation irregularities
Writing	• Prepares required technical and business documentation conveying changes to database processes and start-up procedures using detailed language
Teamwork	• Requests feedback and provides feedback to others in order to improve self or workgroup behaviors • Demonstrates professional and respectful behavior with team members and supervisors
Planning and	• Responds to stated goals during compilation of data dictionary and

SKILL	DESCRIPTION
organising	- data structures, and when managing a database, according to business requirements, including deadlines • Uses a formal decision-making process, setting or clarifying goals, gathering information, and identifying, and evaluating several choices against a limited set of criteria and deadlines
Self-management	• Identifies and adheres to organisational requirements and vendor guidelines
Technology	• Demonstrates interpretation of key principles and concepts underpinning the design, and operation of digital systems and tools

Unit Mapping Information

Supersedes and is equivalent to ICTDBS409 Monitor and administer a database.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for ICTDBS418 Monitor and administer databases

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- configure, monitor, update and manage a database with at least three tables.

In the course of the above, the candidate must:

- confirm data integrity
- monitor data storage requirements
- modify data access privileges
- document and save work.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- backup and recovery methodologies and procedures
- principles of relational database design
- database security concepts
- organisational procedures referring to database processes and start-up procedures
- database server management tools
- structured query language (SQL) principles
- database administration tasks and procedures
- database processes, procedures and concepts of organisations and a vendor.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- industry standard relational database management system
- an operational database requiring authenticated and authorised access, hosted in a network environment or virtual network environment.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

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