



Australian Government

ICTDBS413 Determine database requirements

Release: 1

ICTDBS413 Determine database requirements

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 4.0.

Application

This unit describes the skills and knowledge required to identify the scope and the physical and security requirements of a database, including the assessment and identification of options to meet user requirements.

It applies to individuals employed as database administrators who are required to plan and select a database to meet user requirements.

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. Determine the database size	1.1 Determine the database scope from the user requirements 1.2 Calculate the database size from the database scope and technical specifications. 1.3 Document and justify the size and scope of the database
2. Develop the technical database requirements	2.1 Design and document the data tables and relationships suitable to the user requirements and data sample 2.2 Develop and document the data dictionary, table attributes and keys suitable to the user requirements 2.3 Determine and document the database reports required by the user requirements and user acceptance criteria

3. Determine security, performance, recovery and audit requirements	3.1 Determine and document database security controls appropriate for the user requirements and the organisational data security plan 3.2 Determine and document database performance, database recovery and database audit requirements to meet the user requirements and the organisational data security plan
4. Seek client feedback and approval	4.1 Evaluate and document database management systems against the database scope and size, technical database requirements, and security, performance, recovery and audit requirements to determine the appropriate option for the user 4.2 Present database scope and size, technical database requirements, and security, performance, recovery and audit requirements documentation to the user for feedback 4.3 Review user feedback and adjust the database documentation to meet the user acceptance criteria and user feedback 4.4 Present database documentation to the user for final approval

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
Reading	Interprets and analyses textual information in order to gather detailed information, and confirm requirements
Numeracy	Extracts and calculates numerical information from textual and numerical information to determine and confirm requirements
Writing	Uses technically appropriate language and presents information in a format and layout that conveys factual information
Oral Communication	Uses active listening, questioning and summarising skills, in order to effectively identify, and confirm, requirements
Get the work done	- Uses systematic, analytical processes in complex, non-routine situations, setting goals, gathering relevant information, and identifying, and evaluating options against the agreed criteria - Applies formal problem-solving processes when tackling an unfamiliar problem, breaking complex issues into manageable parts, identifying, and evaluating several options for action - Understands key principles and concepts underpinning the design and operation of digital systems and tools, and applies these when

	identifying database scope and requirements
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTDBS413 Determine database requirements	ICTDBS401 Identify physical database requirements	Edits to title and application to clarify intent and scope. Edits to elements 1–4 and assessment requirements to clarify intent.	Equivalent unit

Links

Companion Volume Implementation Guides are available from VETNet -

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

Assessment Requirements for ICTDBS413 Determine database requirements

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Performance Evidence

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

- For one database:
 - analyse user requirements and system architecture
 - determine the scope and size of the database
 - evaluate at least three database management systems and select option to meet user requirements
 - develop technical database requirements including tables, relationships, dictionary, attributes and keys
 - document the database scope and requirements
 - align database management system and related user security with data security plan
 - seek and incorporate user feedback
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Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements and performance criteria of this unit. This includes:

- Principles of databases and database design
- General features and capabilities of current databases and database management systems
- Data types and storage requirements of data types and database management systems
- Quality assurance practices that apply to database design
- Technical and security database requirements

Assessment Conditions

Skills must be demonstrated in a workplace or simulated environment where conditions are typical of those in an ICT working environment or ICT workplace. This includes:

- User requirements and acceptance criteria
- Technical documentation defining the system architecture
- Operating system specifications and security plan
- Database supplier technical specifications and manuals
- Data sample
- Individual user to consult
- Database package

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

Links

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