



Australian Government

ICTDBS414 Complete database backup and restore

Release: 1

ICTDBS414 Complete database backup and restore

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 establish database backup and restore procedures in accordance with organisational requirements, and consistent with the database architecture.

It applies to individuals who are technical support personnel, such as help desk supervisors, information and communications technology (ICT) support technicians, database support technicians and user-support specialists.

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. Plan database backup and restore	1.1 Examine architecture of database file systems and determine likely risk and failure scenarios 1.2 Determine methods for database backup and restore to mitigate likely risk and failure scenarios 1.3 Prepare backup maintenance schedules according to organisational backup and restore policy 1.4 Prepare contingency plans according to organisational backup and restore policy
2. Undertake backup methods appropriate to database	2.1 Complete full off-line backups with acceptable downtime according to organisational backup and restore

requirements	policy and procedure 2.2 Complete online file backups with acceptable downtime according to organisational backup and restore policy and procedure and organisational data security plan 2.3 Deploy redundant array of inexpensive disks (RAID) configuration aligned with the organisational backup and restore policy 2.4 Arrange off-site copies of backup files consistent with organisational back and restore procedure and organisational data protection plan
3. Establish and test recovery points and disaster-recovery procedures	3.1 Determine and document database recovery points based on backup methods, according to organisational backup and restore policy and procedure 3.2 Test restore process to ensure database can be restored to given recovery points with acceptable down time as specified in organisational backup and restore policy 3.3 Complete and document restoration of databases to point of failure, without loss of committed transactions
4. Create and deploy a standby database	4.1 Create and deploy standby databases to support critical organisational functions according to organisational back and restore policy and procedure 4.2 Prepare documentation for standby databases that meet requirements of organisational backup and restore policy

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	Analyses complex textual information in order to evaluate a range of backup and restoration methods
Numeracy	- Interprets mathematical information in order to construct date and time based schedules - Extracts and calculates numerical information from textual and numerical information to determine and confirm requirements
Writing	- Uses technically specific language in developing plans, schedules and documentation - Articulates information, and presents this information, in a clear, concise, sequential and grammatically-correct manner, and in a

	writing style that is appropriate to the audience
Oral Communication	Facilitates successful discussions by employing effective listening, questioning and summarising skills to ensure that appropriate information is gathered
Navigate the world of work	Recognises and follows, both explicit and implicit protocols, and meets expectations associated with own role when complying with organisational and security standards, and guidelines
Get the work done	- Takes responsibility for planning, sequencing and prioritising tasks, and own workload for efficiency, and for effective outcomes - Makes routine decisions, and implements standard procedures, for routine tasks, using formal decision-making processes for more complex and non-routine situations - Addresses less predictable problems and initiates standard procedures in response to these, applying problem-solving processes in determining a solution - Uses familiar digital technologies and systems to access information, search and enter data, and code, present information and communicate with others, cognisant of data security and safety

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTDBS414 Complete database backup and restore	ICTDBS402 Complete database backup and restore	Editorial updates Edit to application, 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 ICTDBS414 Complete database backup and restore

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Performance Evidence

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

- Backup and restore one database
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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 and functions of diagnostic tools, structured query language (SQL), databases and backup tuning methodologies
- Principles of backup and recovery methods, database administration, database security and open file backup procedures and restore operations
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Assessment Conditions

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

- Organisational data backup and restore policy and procedure
- Organisational security plan
- Vendor documentation
- Information of current industry standard software and diagnostic tools
- Database package with data
- Server, and a networked computer, on which to conduct the backup and restore procedures

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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