



Australian Government

Department of Education, Employment and Workplace Relations

ICAB5180C Integrate database with a website

Release: 1

ICAB5180C Integrate database with a website

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit defines the competency required to ensure database connectivity with a website. 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		

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. Prepare database	1.1. Identify site data needs from technical requirements 1.2. Review existing database to ensure site data needs can be met 1.3. Make additions/adjustments to database as required
2. Create database logons	2.1. Identify site operators and site visitors against business needs 2.2. Determine database permission sets, and authentication and authorisation parameters for each class of user 2.3. Create log-on names using relevant server application utility 2.4. Add log-on names to server application using relevant server utility
3. Create data source names	3.1. Use server utility to create data source names (DSN) as required by website 3.2. Confirm DSN, database log-on name and passwords against business requirements 3.3. Use a server utility to create a database connection using appropriate connectivity tools 3.4. Amend site configuration files as required
4. Test database connectivity	4.1. Retrieve required information for website, including site functionality 4.2. Take action to maintain database integrity according to security benchmarks 4.3. Check that access permissions function correctly

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- Analysis skills to determine data objects required, data structures, business requirements
- Registering a data source name (DSN)
- Use of website administration software and site server utilities

REQUIRED SKILLS AND KNOWLEDGE

- Ability to build a database using a commercially available database product, including: MS SQL server 7.0, Oracle, Sybase
- HTML/XML

Required knowledge

- Data analysis, particularly in determining data types and data structures and query and report design
- CGI
- Primary files and transaction logs
- Open database connection (ODC)
- Website foundations
- Data source names (DSN)

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 successfully ensure database to website connectivity without compromising security and privacy.

To demonstrate competency in this unit the following resources will be needed:

- Web servers
- E-business website
- Requirements documentation
- Business planning documentation

Context of and specific resources for assessment

The integration of databases with web connectivity is of fundamental importance to e-commerce transactions.

This competency requires a breadth, depth and complexity of knowledge and would cover a broad range of varied activities.

An individual in the workplace would be required to undertake a broad range of skilled applications, including requirements to evaluate and analyse current practices in relation to database integration.

The breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and coordination would be characteristic.

The demonstration of competency may also require self-directed application of knowledge and skills, with substantial depth in some areas where judgement is

EVIDENCE GUIDE	
	required in planning and selecting appropriate equipment, services and techniques for self and others. Assessment must ensure: • Applications involve participation in development of strategic initiatives as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team coordination may also be involved.
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 to 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.
Guidance information for assessment	The interdependence of units for assessment purposes may vary with the particular project or scenario. Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

EVIDENCE GUIDE

An individual demonstrating this competency would be able to:

- Demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas
- Analyse and plan approaches to technical problems or management requirements
- Transfer and apply theoretical concepts and/or technical or creative skills to a range of situations
- Evaluate information, using it to forecast for planning or research purposes
- Take responsibility for own outputs in relation to broad quantity and quality parameters
- Take some responsibility for the achievement of group outcomes
- Maintain knowledge of industry products and services

Additionally, an individual demonstrating this competency would be able to:

- Demonstrate understanding of database technology and web interfacing
- Apply solutions to a defined range of problems
- Apply skills and knowledge, with depth in some areas
- Identify, analyse and evaluate information
- Take responsibility for outputs in relation to database and web outputs

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.

RANGE STATEMENT	
Database may include but are not limited to:	• Oracle • Sybase • Microsoft SQL Server • Access connected to a SQL server • Ingres • DB2 • Informix • mSQL • MySQL • SQL Server, etc
User may include:	• a person within a department • a department within the organisation • a third party
Server application may include but is not limited to:	• Apache/MS IIS • SQL Server • other database server
Servers may include:	• BEA Weblogic servers • Apache HTTP server • IBM VisualAge and WebSphere • Microsoft-Internet-Information-Server (IIS) • Windows 2000 server • NetDynamics • Lotus Domino • Netscape Enterprise Server, Netscape-FastTrack, Netscape-Commerce • Sun Microsystems iPlanet web server • iPlanet-Enterprise • Sun Microsystems Java web server • Email servers • File and print servers • FTP servers • Proxy servers
Connectivity tools may include:	• Cold Fusion Professional 1.5 • Sapphire/Web 2.0 • NetDynamics 1.0 • Apple WebObjects Enterprise • ZOPE • open source software
Site functionality may be in	• volumes (hits, page views, transactions,

RANGE STATEMENT

relation to:	searches) • arrival rates • response times by class • user session time • number of concurrent users
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Unit Sector(s)

Unit sector	Build
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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