



Australian Government

Department of Education, Employment and Workplace Relations

ICADBS408A Link an RFID system to a database

Release: 1

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Modification History

Release	Comments
Release 1	This Unit first released with <i>ICA11 Information and Communications Technology Training Package version 1.0</i>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to transfer radio frequency identification (RFID) data to a database.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

Application of the Unit

This unit applies to individuals in a range of information and communications technology (ICT) areas who are required to maintain RFID data and make it available to an RFID system.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>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.</i>

Elements and Performance Criteria

1. Determine data mapping and integration requirements	<p>1.1 Identify and document the format of the data from the RFID system, including data schema</p> <p>1.2 Collect required data, target database requirements and implementation details ensuring uniqueness of entries</p>
2. Perform data transition	<p>2.1 Write and test conversion programs and use conversion tools</p> <p>2.2 Ensure clean data take-on by converting according to database requirements</p> <p>2.3 Use database adaptors and interfaces for data transition</p>
3. Check data transition	<p>3.1 Verify that data transition has been completed according to requirements</p> <p>3.2 Document programs, procedures and processes according to clients requirements</p> <p>3.3 Provide conversion reports to client for sign-off</p>

Required Skills and Knowledge

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

Required skills

- analytical skills to determine data objects required, data structures and business requirements
- communication skills to liaise with clients to discuss issues
- literacy skills to generate database and sample reports
- technical skills to:
 - build a database using a commercially available database product, including Microsoft Structured Query Language (MS SQL) Server 7.0, Oracle and Sybase
 - register a data source name (DSN)
 - use appropriate database data formats
 - use appropriate RFID data formats
 - use data conversion programs
 - use hypertext markup language (HTML) or eXtensible markup language (XML)
 - use ISO/IEC standard 15962:2004 as a reference
 - use website administration software and site server utilities.

Required knowledge

- client database data structures
- client data management and data security policy and procedures
- data analysis, particularly in determining data types and data structures and query and report design
- data source names in use by the organisation
- open database connection (ODC)
- primary files and transaction logs to confirm appropriate database activity
- quality assurance practices
- software tools
- system data requirements
- system's current functionality
- website foundations.

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	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> • identify formats of RFID system output and data fields in database • analyse, write, install and test conversion programs • identify format of data fields of database • write or obtain, and install conversion software • compile entries in database reports.
Context of and specific resources for assessment	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> • conversion tools • database software • networked computers • organisational guidelines • RFID equipment specifications • appropriate learning and assessment support when required • modified equipment for people with special needs.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct observation of candidate configuring an RFID system and database using a range of equipment in a variety of scenarios • evaluation of candidate's documentation that includes programs, procedures and processes • review of candidate-generated conversion reports.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate.</p> <p>Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed.</p> <p>Indigenous people and other people from a non-English speaking background may need additional support.</p> <p>In cases where practical assessment is used it should be combined</p>

	with targeted questioning to assess required knowledge.
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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.

Database may include:	<ul style="list-style-type: none"> • commercial off-the-shelf (COTS) database packages • object-relational databases • proprietary databases • relational databases • software: <ul style="list-style-type: none"> • Access connected to a structured query language (SQL) server • DB2 • Informix • Ingres • Microsoft SQL (MS SQL) server • Mini SQL (mSQL) • MySQL • Oracle • Sybase.
Conversion programs may be in:	<ul style="list-style-type: none"> • object-oriented language • procedural programming language.
Conversion tools may include:	<ul style="list-style-type: none"> • analysis of data quality: <ul style="list-style-type: none"> • QDB or Analyze • WizRule • Unitech Systems Inc • cleansing data: <ul style="list-style-type: none"> • Integrity • Enterprise or Integrator • data-mart management • extraction and transformation: <ul style="list-style-type: none"> • Evolutionary Technologies International (ETI) extract • InfoPump, InfoHub, InfoRefiner and InfoSuite • Passport • Warehouse Manager.

Unit Sector(s)

Database