



Australian Government

Department of Education, Employment and Workplace Relations

ICAPRG504A Deploy an application to a production environment

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 install, uninstall and configure an application to a production environment.

Application of the Unit

This unit applies to individuals responsible for software deployments of enterprise applications. They may work as application developers, administrators, release managers or deployment coordinators.

Licensing/Regulatory Information

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.

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. Plan software installation	1.1 Determine if a client system and a server system meet the requirements for installation 1.2 Determine an installation method 1.3 Review security requirements 1.4 Prepare software-installation plan
2. Perform software installation	2.1 Create an install package for an application 2.2 Test the install package in a test environment 2.3 Deploy the install package to a production environment
3. Plan and test application removal	3.1 Create an uninstall package for removal of installed components 3.2 Test the uninstall package in a test environment
4. Perform database installation	4.1 Deploy a database from the development environment to the production environment 4.2 Specify the connection string to the database
5. Manage application configuration	5.1 Configure the application to use parameters that are valid for the production environment 5.2 Use configuration files to modify deployment variables 5.3 Configure security features in an application

Required Skills and Knowledge

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

Required skills

- communication skills to:
 - interact with developers and stakeholders during the deployment process
 - negotiate requirements to deploy the application with client
- literacy skills to:
 - read and interpret complex technical and non-technical documents
 - write a software installation plan document
- planning and organisational skills to:
 - organise resources for deployment
 - plan software installation
- problem-solving skills to troubleshoot the software installation
- technical skills to:
 - test client and server system specifications
 - write code to create install and uninstall packages.

Required knowledge

- basic knowledge of:
 - database management systems
 - software development life cycle (SDLC)
 - web hosting and domain name registration provider
- detailed knowledge of:
 - coding to create deployment application
 - IT hardware, software and security protocols and standards
 - organisational IT policies, plans and OHS procedures.

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 ability to: • deploy software applications to a production environment including: • preparing software installation plan • planning application re-installation • planning database installation • planning application removal • performing software deployment • using configuration files to easily modify deployment variables • troubleshooting software installation.
Context of and specific resources for assessment	Assessment must ensure access to: • client and server system • sufficient privileges to install packages in client and server systems • database management system software • deployment tools • specific tools and licences, depending on particular platform • appropriate learning and assessment support when required • modified equipment for people with special needs.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • review of candidate's software installation plan • evaluation of: • software installation and removal • database installation • configuration files.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate. 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. Indigenous people and other people from a non-English speaking background may need additional support. In cases where practical assessment is used it should be combined 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.

Requirements may include:	• hard disk space • hardware requirements • memory size • operating system • platform • processor • software requirements • target framework.
Installation method may include:	• ClickOnce • domain name system (DNS) entries, hosting and file transfer protocol (FTP) • MSI • standard Java deployment technologies: • executable Java Archive Files (JARs) • Java WebStart • launch scripts • third party • Xcopy
Security requirements may include:	• authentication and authorisation • database security requirements • network security requirements.
Software installation plan may include:	• backup procedures • configuration definition • constraints • data requirements • dependences • installation procedures • release notes • resource requirements.
Install package may include:	• cab project • executable JAR files • set up project for Windows applications • web setup project.

<i>Deploying a database</i> may include:	• using file transfer protocol (FTP) to back up database • publishing the database using Database Publishing Wizard • using host-provider tools.
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Unit Sector(s)

Programming and software development