



Australian Government

Department of Education, Employment and Workplace Relations

ICASAS402A Implement configuration management strategies

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 implement administrative and technical procedures throughout the software development and documentation life cycle.

Application of the Unit

This unit applies to senior information and communications technology (ICT) staff in a range of areas who are required to ensure that appropriate administrative standards support development environments.

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. Identify and clarify configuration management requirements	1.1 Develop and assemble identification standards for the naming and version control of software and documentation, and provide to stakeholders 1.2 Identify the software configuration tools and procedures for the required level of integration into the programming environment 1.3 Identify responsibilities for configuration management within the project and for ongoing support, including approval of changes 1.4 Take action to ensure that stakeholders are aware of their roles 1.5 Identify the point at which items are subjected to configuration control with stakeholders
2. Employ appropriate control mechanisms	2.1 Identify and document the method for identification and recording of change requests in line with organisational requirements and ensure this is maintained during development process 2.2 Take action to ensure that the evaluation criteria and process for approval of change requests are employed according to organisational requirements 2.3 Take action to ensure that other management, security and access control criteria are employed according to organisational requirements 2.4 Implement controls to ensure that necessary audit trails and alerts for variations or non-conformance are continuously maintained during development
3. Implement monitoring mechanisms	3.1 Implement controls to ensure that mechanisms to identify the status of software throughout the software development life cycle are continuously maintained 3.2 Document the development and maintenance of records and status reports required to show the history of baselines and their links to backups 3.3 Take action to ensure that the level of detail required in the status reports, and identification of target audiences, meets the configuration management procedures, International Organization for Standardization (ISO), International Electrotechnical Commission (IEC) and Australian Standards (AS) and organisational requirements 3.4 Integrate configuration management into general project management processes for monitoring and control purposes and document

4. Manage release of product	4.1 Take action to ensure the physical and functional completeness of items for the purpose of release to all stakeholders 4.2 Identify and implement the requirements for formal control of software products 4.3 Determine and document policies for retention of baseline or master copies, taking into account safety and security, legislative requirements and organisational guidelines
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Required Skills and Knowledge

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

Required skills

- communication skills to:
 - gain consensus on concepts
 - liaise with stakeholders
 - transfer and collect information
- literacy skills to develop technical and business reports
- numeracy skills to manage a budget
- planning and organisational skills to estimate use across a range of predictable project contexts related to either varied or highly specific functions
- problem-solving skills to:
 - identify configuration control with developers and team members
 - scope and prepare time lines, budget and risk manage process
- research skills to analyse and evaluate:
 - broad features of a particular business domain
 - best practice in software development methodologies
- technical skills to use a range of software configuration tools and software applications.

Required knowledge

- project-planning methodologies and tools
- benchmarking methodologies when implementing monitoring mechanisms
- how to formulate software size models and size estimates when employing control mechanisms
- quality assurance and quality processes when implementing monitoring mechanisms
- software development methodologies when identifying and clarifying configuration management requirements.

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: • use quality processes, audit trails and version control to implement administrative and technical procedures throughout the software development and documentation life cycle • implement and maintain reliable and valid configuration management procedures for technical and administrative procedures for use during the software life cycle.
Context of and specific resources for assessment	Assessment must ensure access to: • configuration tools • evaluation criteria • process for approval of change requests • templates for status reports • 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: • verbal or written questioning to assess candidate's knowledge of: • software development • benchmarking methodologies • audit requirements • parallel development • review of candidate's documentation, with particular reference to: • code identification in line with organisational requirements • change control • backup management • version control • release mechanisms • direct observation of candidate briefing stakeholders.
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.

Software may include:	• commercial applications • in-house or customised • organisation-specific • packaged.
Documentation may follow:	• audit trails • ISO, IEC and AS standards • naming standards • project management templates • report writing principles • version control.
Stakeholders may include:	• development team • management • project team • sponsor • testers • user.
Software configuration tools may include:	• Baseline +Plus • ClearCase • Continuous/CM • CVS • PVCS Configuration Builder • PVCS Version Manager • PVCS Version Manager PLUS • RCS • SCCS • Source Integrity • TeamWare • Version +Plus • Version Stamper.
Organisational requirements may include:	• how and what the organisation wants in regard to work environment • preventative maintenance and diagnostic policy, roles and technical responsibilities in the IT department • problem-solution processes

	• vendor and product service level support agreements.
Requirements may relate to:	• application • business • network • people in the organisation • system.
Organisational guidelines may include:	• communication methods • content of emails • dispute resolution • document procedures and templates • downloading information and accessing particular websites • financial control mechanisms • opening mail with attachments • personal use of emails and internet access • virus risk.

Unit Sector(s)

Systems administration and support