Australian Government

Department of Education, Employment and Workplace Relations

ICTSUS4184A Install and test power saving hardware

Release: 1

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

ICTSUS4184A Install and test power saving hardware

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to install and test power saving hardware components in servers, motherboards and other networking equipment installed in ICT applications. 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

Application of the unit	Technical staff who specify, install or upgrade ICT networks apply the skills and knowledge in this unit.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.

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.

|

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan to install and test power saving hardware	1.1. Arrange access to site according to required procedure 1.2. Assess extent of system implementation using feasibility report and *organisational guidelines* 1.3. Produce a report to meet the *customer* and *organisational requirements* 1.4. Liaise with *appropriate person* to obtain approval for the plans with recommendations 1.5. Determine and source *power saving hardware components* according to the agreed plan
2. Install, test and evaluate power saving hardware	2.1. Install and configure components and according to occupational health and safety (OHS) and environmental requirements, plan, manufacturer's and industry standards 2.2. Resolve identified problems 2.3. Test and enhance system performance to meet organisational requirements
3. Complete documentation and clean up worksite	3.1. Produce an evaluation report on the actual cost-benefits of implementing the power saving hardware to the organisation 3.2. Provide a support manual for the customer 3.3. Record all test results and records for the customer 3.4. Restore any changes made to the worksite to customer's satisfaction and obtain sign off

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills

• communication skills to liaise with internal and external personnel on technical, operational and business related matters
• literacy skills to:
    • read technical documentation
    • write reports with design solutions and recommendations in required formats

REQUIRED SKILLS AND KNOWLEDGE

- numeracy skills to assess cost benefits of power saving hardware
- planning and organisational skills to plan, prioritise and monitor own work
- problem solving skills to resolve installation issues
- research skills to interrogate vendor databases and websites to identify solutions to meet client business specifications
- technical skills to evaluate low power devices and methodologies

Required knowledge

- broad knowledge of systems diagnostic features
- business processes
- client business domain, business function and organisation
- compatibility issues and resolution procedures
- configuration of internet protocol (IP) networks
- current industry accepted hardware products
- customer and business liaison
- documenting technical specifications
- linkage between processes
- set-up and configuration procedures
- technologies such as:
  - areas of the hardware relevant to configuration and testing
  - installation procedures
  - power saving hardware functionality
- vendor specifications and requirements for component installation

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 ability to: • ascertain and meet client requirements for installation and testing of power saving hardware • plan and connect the hardware components according to vendor and technical specifications.
Context of and specific resources for assessment	Assessment must ensure: • site on which energy saving solutions can be implemented • use of current power saving hardware currently used in industry • relevant documentation, feasibility studies, equipment manuals and other site related documentation.
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: • direct observation of the candidate carrying out installation and testing activities • review of feasibility report and plans completed by the candidate for different sites • oral or written questioning to assess knowledge.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • ICTSUS4183A Install and test renewable energy system for ICT networks • ICTSUS4185A Install and test power management software • ICTSUS4186A Install thin client applications for Power over Ethernet • ICTSUS5187A Implement server virtualisation for a sustainable ICT system.

EVIDENCE GUIDE	
	Aboriginal people and other people from a non-English speaking background may have second language issues.
	Access must be provided to appropriate learning and assessment support when required.
	Assessment processes and techniques must be culturally appropriate, and appropriate to the oral communication skill level, and language and literacy capacity of the candidate and the work being performed.
	In all cases where practical assessment is used it will be combined with targeted questioning to assess required knowledge. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.
	Where applicable, physical resources should include equipment modified for people with special needs.

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.

Organisational guidelines may include:	• budget constraints • communication methods • dispute resolution • documenting procedures and templates • financial control mechanisms • infrastructure

Innovation and Business Skills Australia

RANGE STATEMENT	
	• operational costs.
Customer may include:	• department within the organisation • government department • person within a department • private organisation • third party.
Organisational requirements may include:	• preventative maintenance and diagnostic policy • problem solution processes • roles and technical responsibilities in the IT department • vendor and product service level support agreements • work environment.
Appropriate person may include:	• authorised business representative • infrastructure administrator • network administrator • power systems manager • property manager • supervisor.

Power saving hardware components may include:	• extremely low power motherboards
	• memory devices:
	   • compact flash
	   • electronic drives
	   • flash drives
	   • USB
	• power supply
	• processor.

Unit Sector(s)

Unit sector	Telecommunications

Co-requisite units

Co-requisite units		

Competency field

Competency field	Sustainability

Innovation and Business Skills Australia