



Australian Government

Department of Education, Employment and Workplace Relations

ICTTEN4073A Cut over customer premises equipment major upgrades

Release: 1

ICTTEN4073A Cut over customer premises equipment major upgrades

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to cut over major equipment and network upgrades in customer premises. It involves cut over works, testing and rectifying problems.</p> <p>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.</p>
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Application of the Unit

Application of the unit	<p>Technical staff who upgrade customer premises systems and equipment apply the skills and knowledge in this unit.</p> <p>Relevant job roles include supervisors in charge of installation and maintenance teams responsible for new installations and upgrades of telecommunications customer equipment.</p> <p>This unit applies to indoor and outdoor installation within customer premises. Customer premises equipment (CPE) includes telephony, data, video, digital broadcasting and computer networks including local area networks (LAN) and multimedia in domestic, commercial or industrial installations.</p>
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

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 for the cut over	1.1. Obtain relevant legislation, codes, regulations and standards for compliance when conducting work 1.2. Notify customer for site access, security arrangements and location details of customer equipment for major upgrade 1.3. Identify site hazards and notify appropriate personnel to make site safe 1.4. Prepare a cut over plan and seek approval from customer 1.5. Complete functional testing of new systems and equipment prior to cut over to minimise system downtime 1.6. Notify network carrier of cut over details to prevent unnecessary alarm call outs and reports 1.7. Organise system backup from support personnel
2. Cut over the system and equipment into service	2.1. Conduct cut over works for major system upgrade according to cut over plan with minimal disruption to customer service according to occupational health and safety (OHS) and environmental requirements 2.2. Conduct tests according to technical manuals and specifications to complete installation task 2.3. Analyse test results to verify system compatibility and interoperability with existing system 2.4. Rectify any problems if required
3. Finalise work and clean up worksite	3.1. Complete documentation containing installation details and test records 3.2. Amend site records to show existing equipment layout 3.3. Organise customer training in the new or modified system 3.4. Clean up and restore site to customer satisfaction 3.5. Collect and dispose of waste material and debris according to environmental requirements 3.6. Notify customer of job completion to obtain sign off and present with a copy of documentations

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- analytical skills to evaluate technical test results to diagnose problem
- communication skills to interact with enterprise personnel and customers while maintaining a customer focus and consideration of customer needs
- literacy skills to read and interpret technical documentation, such as equipment manuals and specifications
- numeracy skills to take and analyse measurements
- planning and organisational skills to organise and maintain equipment
- problem solving skills to solve equipment and logistics problems
- task management skills to work systematically with required attention to detail and adherence to all safety requirements
- technical skills to:
 - perform cut over procedures
 - perform fault clearance
 - use diagnostic equipment
 - use hand and power tools

Required knowledge

- cut over procedures
- detailed knowledge of CPE equipment
- features and operating requirements of test equipment
- information required to operate equipment according to a test specification
- legislation, codes of practice and other formal agreements that impact on the work activity
- manufacturer's requirements for safe operation of equipment
- specific OHS requirements relating to the activity and site conditions
- test methods and performance requirements
- typical issues and challenges that occur on site

Evidence Guide

EVIDENCE GUIDE	
<p>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.</p>	
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"> • develop and implement a cut over plan • identify and organise resources including customer resources necessary to complete the cut over • conduct relevant tests and interpret test results • identify and resolve problems.
Context of, and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • site where cut over can be conducted • use of plant, tools and equipment currently used in industry • relevant regulatory and equipment documentation that impact on work activities.
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 the candidate performing cut over procedures of CPE • review of cut over plans, installation documents and records prepared by the candidate • oral or written questioning to assess knowledge of cut over and CPE installation procedures.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • ICTTEN4072A Effect changes to existing customer premises equipment systems and equipment • ICTTEN4076A Complete equipment and software upgrades. <p>Aboriginal people and other people from a non-English speaking background may have second language issues</p>

EVIDENCE GUIDE	
	<p>Access must be provided to appropriate learning and assessment support when required.</p> <p>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.</p> <p>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.</p> <p>Where applicable, physical resources should include equipment modified for people with special needs.</p>

Range Statement

RANGE STATEMENT	
<p>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.</p>	
<p><i>Relevant legislation, codes, regulations and standards</i> may include:</p>	<ul style="list-style-type: none"> • Australian Construction Industry Forum (ACIF) standards and codes AS/ACIF S008:2006 and AS/ACIF S009:2006 • AS Communications Cabling Manual (CCM) Volume 1 • AS/NZS 3000:2007 • AS/NZS 3080:2003 • AS/NZS 3084:2003 • AS/NZS 3085.1:2004 • AS/NZS IEC 61935.1:2006 • AS/NZS IEC 61935.2:2006

RANGE STATEMENT	
	<ul style="list-style-type: none"> • AS/NZS ISO/IEC 14763.3:2007 • AS/NZS ISO/IEC 15018:2005 • AS/NZS ISO/IEC 24702:2007 • cabling security codes and regulations • Environmental Protection Acts • OHS.
Customer may be:	<ul style="list-style-type: none"> • asset manager • contractor • nominated customer representative • project manager • service provider.
Customer equipment may include:	<ul style="list-style-type: none"> • alarms systems • internet protocol (IP) private branch exchange (PBX) • IP PBX server • IP security systems • internet protocol TV (IPTV) • network management addition • PBX • session initiation protocol (SIP)-enabled unified communication (UC) system • video conferencing equipment • voice over internet protocol (VoIP) gateway • worldwide interoperability for microwave access (WiMAX) CPE.
Major upgrade may include:	<ul style="list-style-type: none"> • network capacity upgrade • network major software upgrade • network services upgrade • network technology upgrade • system integration.
Hazards may include:	<ul style="list-style-type: none"> • building debris • earth potential rise (EPR) • glass fibre • live power lines • manual handling • mud and water • natural gas and other gas build up • optical fibre cable may contain hazardous light • radio frequency (RF) equipment emitting radiation

RANGE STATEMENT	
	<ul style="list-style-type: none"> • remote power feeding services which operate at above telecommunications network voltage (TNV) • vermin.
<i>Cut over plan</i> may include:	<ul style="list-style-type: none"> • access and security arrangements • after hours access • contingencies • contingency plans • customers communication priorities • customers communications needs • downtime • installation of backup equipment • provision of temporary services • testing procedures • timing and disruption to services.
<i>Network carrier</i> refers to:	<ul style="list-style-type: none"> • asset owner • internet service provider • service provider.
<i>Support personnel</i> may include:	<ul style="list-style-type: none"> • help desk • IT support • network operations support • vendor backup.
<i>Cut over works</i> may include:	<ul style="list-style-type: none"> • commission of new system • installation of new additional equipment • installation of new software • integration of new equipment into existing system • jumpering of bypass connection • provision of temporary service • removal of redundant equipment • test on new system.
<i>OHS and environmental requirements</i> may include:	<ul style="list-style-type: none"> • decommissioning and isolating worksite and lines prior to commencement • identifying other services, including power and gas • personal protective clothing: <ul style="list-style-type: none"> • earmuffs • gloves • head protection • kneepads

RANGE STATEMENT	
	<ul style="list-style-type: none"> • masks • protective suits • safety boots • safety glasses • safe working practices, such as the safe use and handling of: <ul style="list-style-type: none"> • asbestos • chemicals • materials • tools and equipment • work platforms • special access requirements • suitable light and ventilation • environmental considerations: <ul style="list-style-type: none"> • clean-up protection • stormwater protection • waste management.
<i>Tests</i> may include:	<ul style="list-style-type: none"> • ability to make and receive a call • configuration • diagnostic • programme checks • routing • software • switching • traffic measurement • transmission.

Unit Sector(s)

Unit sector	Telecommunications
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Co-requisite units

Co-requisite units	
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Co-requisite units		

Competency field

Competency field	Telecommunications networks engineering
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