



Australian Government

Department of Education, Employment and Workplace Relations

ICTTEN5061A Cut over new and replacement network equipment

Release: 1

ICTTEN5061A Cut over new and replacement network equipment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to effectively cut over and test telecommunications network equipment in a short period of time. It includes processes for checking plans, obtaining equipment and supplies, testing procedures and administrative tasks. 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	Field officers, technicians or technical supervisors from carriers, contractors or other service providers apply the skills and knowledge in this unit. It involves the fast change over of new and existing equipment in telecommunications networks including digital switching and transmission, wireless and optical networks. It particularly applies to integration of new and emerging internet protocol (IP) based technologies.
--------------------------------	---

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 the cut over strategy	1.1. Determine the nature and scope of the cut over activity from appropriate personnel 1.2. Prepare a cut over management plan in agreement with appropriate personnel 1.3. Obtain outage management plan if available otherwise prepare a contingency plan to ensure the system integration proceeds according to plan 1.4. Notify alarm management centre of action planned and obtain authority to proceed 1.5. Notify customers affected by the outage of time and likely duration
2. Cut over and test equipment into service	2.1. Perform cut over activities in a safe manner with minimal interruption to service and according to the cut over management plan 2.2. Conduct tests specified in the cut over plan according to technical manuals and specifications 2.3. Record and assess test results and ensure problems identified during cut over are rectified or escalated according to enterprise procedures 2.4. Analyse alarms for fault conditions in conjunction with network management centre 2.5. Enact contingency plans in the event of major problems during cut over
3. Complete administrative tasks	3.1. Complete test result sheets and hand over to operational personnel according to enterprise requirements 3.2. Ensure site is cleaned and ready for operational staff 3.3. Complete work documentation and administrative tasks and forward to the appropriate area according to enterprise policy 3.4. Notify project completion to appropriate personnel 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 AND KNOWLEDGE**Required skills**

- analytical skills to interpret test equipment settings and readings
- communication skills to liaise with customers and technical staff to ensure requirements are known and can be met within timeframes
- literacy skills to interpret technical specifications and related documentation
- numeracy skills to make calculations and necessary calibration changes
- planning and organisation skills to make site access and equipment delivery arrangements
- problem solving skills to account for unexpected faults or equipment configuration anomalies
- safety awareness skills to:
 - apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
 - select and use required personal protective equipment conforming to industry and occupational health and safety (OHS) standards
 - work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- technical skills to:
 - analyse alarms
 - conduct tests
 - correctly handle, connect and calibrate test equipment
 - perform cut over activities

Required knowledge

- electrical and optical properties to be measured
- legislation and licensing surrounding installation of telecommunications equipment
- power requirements and electrical safety
- test equipment types suitable for tests to be made
- transmission hierarchy and switching principles
- transmission type and signals that may be encountered

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:

- develop a contingency plan
- implement a cut over plan and an outage plan
- apply enterprise escalation and outage procedures
- cut over and test network equipment within an industry acceptable time period.

Context of and specific resources for assessment

Assessment must ensure:

- a network and equipment for cut over
- equipment currently used in industry
- systems manuals, specifications and enterprise policy.

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 undertaking cut over preparations and processes
- review of cut over test results and records completed by the candidate
- oral or written questioning to assess required knowledge.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- ICTTEN5060A Integrate new systems and equipment into the telecommunications network.

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.

EVIDENCE GUIDE

	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.

Appropriate personnel may include:

- network manager
- planning manager
- project consultant
- project manager
- vendor contact.

Cut over management plan may include:

- additional resources
- cut over activities:
 - address interoperability issues
 - install new system and equipment
 - test new system and equipment
- integration processes
- rapid deployment strategy
- risks

RANGE STATEMENT	
	• roles and responsibilities of personnel • software tools • system outage • test hardware • vendor input • vendor support • vendor warranty.
Outage management plan may include:	• alternate transmission path • contingency plan • customers affected • cut over plan • emergency communications • outage duration • outage times • parts of network affected • system backup • systems affected.
Contingency plan may include:	• network operations notification • redundancy backup solution • system expert on standby • vendor on standby.
Customers may include:	• contractor • end users • other divisions of the company • small, medium or large organisations • vendor or supplier • wholesale service providers.
Tests may include:	• alarms • end to end • performance: • bit error rate (BER) • data transmission • quality of service (QoS) • traffic flow: • congestion • delay • latency • packet loss.

Unit Sector(s)

Unit sector	Telecommunications
--------------------	--------------------

Co-requisite units

Co-requisite units		

Competency field

Competency field	Telecommunications networks engineering
-------------------------	---