



Australian Government

Department of Education, Employment and Workplace Relations

ICTTEN5092A Undertake planned outage management

Release: 1

ICTTEN5092A Undertake planned outage management

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to undertake planned outage management in telecommunications networks resulting from maintenance, network upgrades or cut overs. It involves strategies for dealing with customers, operational staff and associated system restoration. 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	Network engineering staff who manage planned outages resulting from network maintenance and upgrades apply the skills and knowledge in this unit. It involves the management of planned outages resulting from the fast change over of new and existing equipment in telecommunications networks including digital switching and transmission, wireless and optical networks. It is particularly relevant 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. Prepare for implementation of planned outage	1.1. Determine the requirements and purpose of the outage from the outage plan obtained from relevant personnel 1.2. Analyse all relevant data to determine the likely impact of the outage on clients and the network 1.3. Notify customer of outage work and disruption to service 1.4. Prepare for contingencies according to the contingency plan as specified in the outage plan
2. Implement planned outage	2.1. Conduct and monitor outage work as prescribed and implement contingency plan if required 2.2. Restore system to normal operational status and conduct performance tests of the system according to specifications 2.3. Analyse test results and certify system is operating to manufacturer's specifications 2.4. Notify relevant personnel of completed outage work and of service restoration
3. Undertake administrative tasks	3.1. Document problems that occurred during outage or restoration of service and report these as continuous improvement according to enterprise quality assurance policy 3.2. Complete required documentation and update records to reflect any changes made in the course of service restoration according to enterprise policy

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
• analytical skills to interpret test equipment setups, settings and instrument readings • communication and negotiation skills to liaise with customers and technical staff to ensure service level agreement requirements are known and can be met within timeframes • literacy skills to read and interpret technical specifications and related

REQUIRED SKILLS AND KNOWLEDGE

- documentation
- numeracy skills to make calculations and necessary calibration changes
- planning and organisation skills to implement outage management plan and contingency plan
- 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
 - work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- technical skills to correctly handle, connect and calibrate test equipment

Required knowledge

- electrical and optical principles
- legislation and licensing surrounding installation of telecommunications equipment
- power requirements and electrical safety
- protection switching
- telecommunications networks
- 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:

- implement outage plan, complying with service assurance guidelines and all related OHS requirements and work practices
- conduct performance tests to verify normal operation.

Context of and specific resources for assessment

Assessment must ensure:

- sites on which outage management may be conducted
- use of testing equipment currently used in industry
- manufacturer's and enterprise equipment 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 conducting performance tests to verify normal operation
- review of outage plans completed by the candidate for different scenarios and situations
- oral or written questioning to assess knowledge of likely impact of outage on both the customer and the network.

Guidance information for assessment

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

- ICTTEN5061A Cut over new and replacement network equipment
- ICTTEN6044A Coordinate fault rectification and restoration of service following network outages.

Aboriginal people and other people from a non-English speaking background may have second language issues.

EVIDENCE GUIDE

	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.

<i>Outage</i> may include:	• loss of service to customers • planned outage due to network upgrade or maintenance • service level agreements • unplanned outage due to a network fault.
<i>Outage plan</i> may include:	• affected parties • contingency plan • impact analysis • network operations centre (NOC) role • restoration • systems to be shut down

RANGE STATEMENT	
	timelines.
Relevant personnel may include:	- design engineer - NOC - project manager.
Relevant data may include:	- alarm conditions - client reports - environmental factors - historical data - industry and vendor profile - NOC reports - service level degradation - technical reports - test results from remote interrogation.
Likely impact may include:	- customer impact: - disruption of service - intermittent performance - loss of service and revenue - network impact: - congestion - drop out - errors - excessive latency - limited coverage - no transmission - poor grade of service - poor signal quality - routing problems.
Contingency plan may include:	- additional notification to affected customers - provision of: - additional services - additional technical support - redundant path - standby equipment.
Quality assurance may include:	- acting on logs, reports and other data to guide ongoing quality improvements - updating logs and completing reporting on installation or maintenance activities.
Documentation may include:	completing job orders and submitting to

RANGE STATEMENT

	appropriate enterprise organisational unit • completing test sheets according to specification and logging test instrument usage • following quality control procedures • handing over installation briefs, documents and equipment manuals to operational staff • recording test results and updating appropriate data bases • updating design specifications and returning to design area as required by enterprise requirements.
--	--

Unit Sector(s)

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

Co-requisite units

Co-requisite units	

Competency field

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