



Australian Government

ICTTEN509 Provide expert advice and support on complex faults

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to methodically diagnose complex faults, and organise repair or replacement of defective parts for customer premises' equipment (CPE).

It applies to individuals who work as telecommunications officers, installers, maintenance staff, and manufacturers or equipment specialists employed in an advisory and technical rectification role for commercial or residential installations.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Telecommunications – Telecommunications Networks Engineering

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish background information	1.1 Contact client to identify type of fault and occurrence 1.2 Obtain report of any action taken by first fault repairer and subsequent result 1.3 Analyse fault history to establish any fault patterns, including questioning personnel involved in previous fault repair if relevant 1.4 Develop strategies for identification and repair using advice from other engineering and technical personnel 1.5 Refer to relevant legislation, codes, regulations and standards relating to repair

ELEMENT	PERFORMANCE CRITERIA
	1.6 Inform customer of issues and possible solutions
2. Undertake fault diagnostic	2.1 Isolate fault progressively using a fault identification approach to remove likely variables from assessment 2.2 Identify fault in the shortest time possible or escalate to appropriate level 2.3 Seek back-up support from the product manufacturer when required
3. Organise fault rectification	3.1 Determine options to rectify fault, including any downtime, and present to customer for decision 3.2 Replace or repair defective parts or equipment according to service agreement 3.3 Reprogram equipment as required 3.4 Perform work safely, for both the repairer and customer 3.5 Dismantle and remove temporary service safely and efficiently, where appropriate 3.6 Provide on-site repair staff with clear and precise instructions on fault rectification where appropriate
4. Document fault details	4.1 Record details of fault and actions taken to find, repair and store for future reference 4.2 Advise product manufacturer of fault and repair details if applicable 4.3 Recommend changes to product or product model design where appropriate 4.4 Advise client and obtain sign-off

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.3, 3.2	Identifies, analyses and evaluates technical documentation including plans, codes, standards and

		regulatory information
Writing	1.1, 1.4, 1.6, 2.3, 3.6, 4.1, 4.2	Prepares clear and concise written reports and workplace documentation incorporating technical language to communicate complex information clearly and effectively
Oral Communication	1.1, 1.3, 1.4, 1.6, 2.3, 3.1, 3.6, 4.2-4.4	- Participates in exchanges with internal and external personnel using appropriate strategies to extract main ideas and information from oral texts - Employs listening and questioning techniques to confirm understanding
Numeracy	2.1, 3.3	Uses mathematical formulae to interpret technical data and measurements relating to equipment operations
Navigate the world of work	1.5, 3.4, 3.5	Takes personal responsibility for adherence to legal and regulatory responsibilities and organisational policies and protocols relevant to own work
Interact with others	1.1, 1.4, 1.6, 2.3, 4.2, 4.4	- Collaborates with others to achieve joint outcomes, playing an active role in negotiating positive outcomes - Selects and uses appropriate conventions and protocols when communicating with customers and personnel in a range of work contexts
Get the work done	1.2, 2.1, 2.2, 3.2, 3.3	- Uses a combination of formal, logical planning processes and an increasingly intuitive understanding of context to identify and rectify technical faults - Understands key principles and concepts underpinning design and operation of digital systems and tools, and applies these as required - Implements actions according to a predetermined plan, making adjustments if necessary - Makes decisions quickly and intuitively in familiar situations requiring immediate attention, drawing on past experience to identify key variables and determine the best course of action - Uses analytical processes to decide on a course of action, establishing criteria for deciding between options, and seeking input and advice from others when necessary

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTTEN509 Provide expert advice and support on complex faults	ICTTEN5084A Provide expert advice and support on complex faults	Updated to meet Standards for Training Packages.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTTEN509 Provide expert advice and support on complex faults

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Performance Evidence

Evidence of ability to:

- methodically identify and rank likely causes of faults
- analyse and interpret test results
- apply enterprise escalation and outage procedures
- prioritise fault rectification in a timely manner and report progress
- organise repair of fault and conduct of tests to verify outcomes
- prepare documentation of fault:
 - nature
 - location
 - likely causes
 - repair methodology
 - recommendations relating to system redesign or specification.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- explain features and operating requirements of test equipment
- summarise information required to operate remote diagnostic equipment according to a test specification
- outline legislation, codes of practice and other formal agreements that impact the work activity
- explain manufacturer's requirements for effective operation of equipment
- summarise specific work health and safety (WHS) requirements relating to the activity and site conditions
- outline test methods and performance requirements

- explain typical issues and challenges that occur on site.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances should be typical of those experienced in the telecommunications networks engineering field of work and include access to:

- sites on which fault diagnostics may be conducted
- testing equipment currently used in industry
- relevant regulatory and equipment documentation impacting complex fault repairs.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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