



Australian Government

ICTTEN303 Locate, identify and rectify recurrent network faults

Release: 1

ICTTEN303 Locate, identify and rectify recurrent network faults

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 use systematic and logical fault-finding techniques according to all safety requirements and work practices.

It applies to individuals working as cablers and technicians who install and maintain a broad range of telecommunications networks.

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. Prepare for fault-finding activity	1.1 Prepare for given work according to work health and safety (WHS) and environmental requirements 1.2 Arrange access to site according to required procedure 1.3 Locate existing and potential site hazards 1.4 Contact customer to verify nature of recurrent fault and the network type
2. Conduct activities for recurrent network fault-finding	2.1 Analyse fault history using fault records to establish nature of fault 2.2 Select test equipment and conduct appropriate test to identify potential faults ensuring the diagnostic process does not compromise

ELEMENT	PERFORMANCE CRITERIA
	the integrity of the network element or system 2.3 Evaluate test results to determine relevant symptoms of recurrent fault using appropriate methods and appropriate process 2.4 Locate probable cause, type and location of the fault 2.5 Rectify fault or escalate to appropriate level
3. Report fault-findings and solutions	3.1 Prepare customer report on the diagnostic procedure, fault identification and fault clearance 3.2 Update fault records database 3.3 Restore worksite to the customer's satisfaction 3.4 Notify customer 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	1.2, 2.1	Recognises and interprets technical documentation to determine important information
Writing	1.4, 3.1, 3.2, 3.4	Uses clear, specific and industry-related terminology to develop basic reports and in all written tasks
Oral Communication	1.4, 3.4	- Liaises with customers about technical requirements using specific and relevant language - Uses listening and questioning techniques to confirm understanding
Numeracy	2.3	Evaluates and reviews technical data for specifications
Navigate the world of work	1.1, 3.3	- Appreciates implications of legal and regulatory responsibilities related to own role - Seeks advice about expectations when preparing for work
Get the work done	1.2, 1.3, 2.2, 2.4, 2.5	- Determines job priorities and works logically and systematically to undertake clearly defined and familiar tasks - Implements actions according to a predetermined plan, making slight adjustments if necessary and addressing

		some unexpected issues • Takes responsibility for routine decision-making by selecting from a range of predetermined options in routine situations, identifying and taking some situational factors into account • Diagnoses and implements standard solutions to for an increasing number of routine problems, seeking assistance from more experienced colleagues when required • Understands purposes and specific functions of common digital systems and uses them effectively to complete routine tasks
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTTEN303 Locate, identify and rectify recurrent network faults	ICTTEN3063A Locate, identify and rectify recurrent network 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 ICTTEN303 Locate, identify and rectify recurrent network faults

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Performance Evidence

Evidence of ability to:

- discuss faults with clients
- test telecommunications networks to identify faults
- identify and rectify recurrent faults
- conduct and report on a fault-finding task in a telecommunications network for a range of faults
- use systematic and logical fault-finding techniques in telecommunications networks and field testing procedures to particular workplace situations
- comply with all related work health and safety (WHS) requirements and work practices
- notify customer when work has been complete and obtain sign off.

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:

- outline application of Ohm's law, impedance and reactance formulas to solve alternating current (AC) electrical problems when diagnosing faults
- summarise behaviour of faulty network elements, including symptoms and impact on network
- clarify interpretation of test results and network element/system specifications
- outline the operation and purpose of testing equipment
- explain the operation of transformers
- provide a summary of telecommunications networks
- describe performance testing and fault-finding techniques of telecommunications networks
- summarise systematic and logical fault-finding

- describe types of power sources used in telecommunications networks.

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 network testing and fault-finding may be conducted
- line transmission, optical and radio measurement equipment currently used in industry
- system documentation, and other site-related documentation necessary to conduct tests and fault-finding investigations.

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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