



Australian Government

ICTRFN406 Maintain hybrid fibre coaxial broadband cable network

Release: 2

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Modification History

Release	Comments
Release 2	This version released with ICT Information and Communications Technology Training Package Version 5.0.
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 conduct routine maintenance tasks, analysing results and initiating corrective action.

It applies to individuals working as field officers from telecommunications carriers, service providers and contractors. They combine a broad range of optical and radio frequency (RF) technical skills with organisational skills to maintain the hybrid fibre coaxial (HFC) broadband cable network, generally with limited supervision and guidance.

Work functions in the occupational areas where this unit may be used are subject to regulatory requirements. Refer to the ICT Implementation Guide Companion Volume or the relevant regulator for details of licensing, legislative or certification requirements.

Unit Sector

Telecommunications – radio frequency networks

Elements and Performance Criteria

Elements	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 routine maintenance of	1.1 Obtain relevant legislation, codes, regulations and standards for given work

broadband cable network	1.2 Determine HFC network elements requiring maintenance and obtain maintenance details from various HFC manufacturer equipment manuals 1.3 Plan detailed routine maintenance schedule and discuss with all relevant personnel 1.4 Notify network operations centre (NOC) of proposed maintenance details and maintenance schedule 1.5 Assess potential impact of proposed maintenance on clients and network, and plan for minimal possible outage or deferral of maintenance 1.6 Obtain necessary tools and resources, and test equipment to undertake maintenance 1.7 Ascertain and record recent network stability and network performance
2. Undertake routine HFC network maintenance tasks	2.1 Conduct routine maintenance tasks according to documented enterprise instructions, following work health and safety (WHS) and environmental requirements, and record results 2.2 Protect network from excessive interference or degradation of service during maintenance routines 2.3 Monitor relevant alarms during running of maintenance tasks and report incidences to NOC 2.4 Escalate unresolved faults according to established enterprise procedure 2.5 Conduct performance measurements following routine maintenance schedule
3. Analyse results and initiate corrective action	3.1 Assess outcomes of performance measurements and maintenance routines to ensure they are according to specification 3.2 Analyse identified problems for likely impact and repair within capability, and initiate or escalate repair action where repair is beyond capability 3.3 Undertake outage if required in conjunction with NOC and according to prescribed enterprise outage plan 3.4 Record problems and incidences in maintenance log for future action as required by maintenance agreement 3.5 Verify alarms to ensure maintenance routines did not generate further problems

Foundation Skills

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

Skill	Description
Reading	Recognises and interprets enterprise, regulatory and technical information from relevant sources to determine all specifications and frameworks
Writing	Uses clear, specific and industry related terminology to complete and update workplace documentation and in written communications to relevant personnel
Oral Communication	- Liaises with a diverse range of personnel to provide advice and guidance using relevant language - Uses listening and questioning techniques to confirm understanding
Numeracy	Interprets numerical information and applies basic calculations to conduct performance measurements
Navigate the world of work	- Takes personal responsibility for adherence to legal and regulatory responsibilities relevant to own work, with specific reference to safety and environmental requirements - Seeks advice from others when a situation becomes too complex to manage personally
Get the work done	- Determines job priorities, resources and equipment 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 situational factors into account - Responds to typical problems in different situations and implements standard solutions - Understands the purposes and specific functions of common digital systems and uses them effectively to complete routine tasks - Uses experiences to evaluate and identify improvements for future work

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTRFN406 Maintain hybrid fibre coaxial broadband cable network (Release 2)	ICTRFN406 Maintain hybrid fibre coaxial broadband cable network (Release 1)	Updates to performance evidence and knowledge evidence. Updates to template to apply consistent format between units.	Equivalent unit

Links

Companion Volume Implementation Guides are available from VETNet -

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