



Australian Government

**Assessment Requirements for ICTCBL331
Conduct basic identification and
fault-finding within cabling networks and
customer equipment**

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Modification History

Release	Comments
Release 1	This version released with ICT Information and Communications Technology Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to perform the tasks outlined in the elements, performance criteria, and foundation skills, and to do this on at least one of the following network termination device (NTD)/customer equipment systems:

- satellite modem/ethernet/telephony
- fixed wireless modem/ethernet/telephony
- fibre optic TX-RX/ethernet/telephony
- hybrid fibre coaxial (HFC) modem/ethernet/telephony
- digital subscriber line (DSL) modem/ethernet/telephony.

Depending on the system/s the candidate works on, the candidate must demonstrate the ability to:

- connect NTDs to customer equipment
- set-up and operate test instruments
- gather appropriate instrument test cables and adaptors
- determine status of cables/equipment to be tested such as safety and live or inactive status
- identify different cable types and their association with NTD/customer equipment
- identify whether or not NTD/customer equipment is operating correctly
- search the internet for equipment user guides
- replace faulty cable or patch cords after testing or identifying damage
- replace or re-terminate faulty sockets or connectors
- perform a browser search of a web page to confirm system is working.

Knowledge Evidence

The candidate must demonstrate the knowledge required to complete the tasks outlined in the elements, performance criteria, and foundation skills, which includes knowledge about:

- relevant legislation, regulations, codes, standards and associated industry guidelines, in particular:
 - Australian Communications and Media Authority (ACMA) regulations
 - work health and safety (WHS) regulations for electrical, fibre optic and electromagnetic telecommunications systems
- hazard identification such as laser light and safety signs used for telecommunications equipment
- typical equipment connected to NTD including:
 - personal computer devices including:
 - desktop/mobile computing devices
 - smartphone
 - printers
 - other devices
 - wi-fi modem/switch/router
 - DSL filters
 - internet service provider (ISP) gateway switch/router (ISP or retailer)
 - internet protocol TV (IPTV)
 - IP security, digital home networks
 - IP-based cable access TV (CATV)
 - IP core and access networks
 - home automation
 - interactive TV
 - smart grids
 - cloud computing
- basic interconnection concepts for NTD and customer equipment application including:
 - fibre optic
 - fixed radio
 - satellite
 - HFC
 - DSL twisted pair
- cable types used for NTD/customer equipment connections including:
 - Cat 5e unshielded twisted pair (UTP) cable
 - Cat 6 UTP cable
 - Cat 6/7 shielded twisted pair (STP) cable
 - RG6 coaxial cable (quad shielded)
 - fibre optic and other cable types for recognition/demonstration of the NTD network side
 - appropriate connectors for testing cables
 - appropriate adaptors and test leads for test instruments and cables to be tested
- common basic tests utilised with each NTD/customer equipment system using:

- structured cabling certifiers
- structured cabling verification/qualification tester
- wire mapper
- oscillator and probe
- multimeter
- RF power measurement (RX)
- time-domain reflectometer (TDR), available in SC certifiers
- ADSL/VDSL test instruments
- other appropriate test equipment
- NTD or customer equipment user guides
- purpose and use of test results
- fault escalation enterprise processes.

Assessment Conditions

Skills must be assessed in a workplace or simulated environment where conditions are typical of those in a telecommunications work environment or workplace.

Access is required to:

- satellite modem/ethernet/telephony
- fixed wireless modem/ethernet/telephony
- fibre optic TX-RX/ethernet/telephony
- HFC modem/ethernet/telephony
- DSL modem/ethernet/telephony.

As a minimum, customer equipment may also require a portable computer, wi-fi modems, switch/router or devices that combine these parameters

Cable segments that use passive devices will also require access to RF splitters or DSL filters.

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

Links

Companion Volume Implementation Guides are available from VETNet -

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