



Australian Government

ICTCBL314 Install network cable equipment

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 install indoor or outdoor, domestic, commercial or industrial network cable equipment at a client's premises or service provider access networks. This may include communications applications in telephony, broadband, data, video, radio frequency (RF) equipment, security and computer networks, including local area networks (LAN), wide area networks (WAN) and multimedia.

It applies to technicians and lineman installers who install network cable equipment within the broadband infrastructure deployment where they may upgrade coaxial or optical fibre cables as part of a hybrid fibre coaxial (HFC) network, a broadband access network or a large client private network.

Work functions in the occupational areas where this unit may be used are subject to regulatory requirements. Refer to the Implementation Guide Companion Volume or the relevant regulator for specific guidance on requirements.

Unit Sector

Telecommunications – cabling

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 installation	1.1 Obtain relevant legislation, codes, regulations and standards for given work 1.2 Scope work by obtaining project plan from appropriate personnel and arrange for site access to comply with security arrangements 1.3 Notify appropriate personnel of identified safety hazards at worksite

ELEMENT	PERFORMANCE CRITERIA
	1.4 Determine cable route and type of network cable equipment from project plan, and identify and avoid other services 1.5 Obtain plant, tools and safety equipment and material to perform tasks safely and efficiently 1.6 Evaluate nature of job and infrastructure hierarchy from plan, and obtain approval from client on key features of installation to meet client requirements 1.7 Coordinate other parties to minimise disruption to services and down time 1.8 Segregate incoming and outgoing cables to facilitate access and avoid overlaying and backtracking of cable
2. Install required cable and equipment support structure	2.1 Evaluate existing equipment support structure and develop plan for additional support structure provisioning 2.2 Install additional cable support, equipment support structure and cable runs according to manufacturer's specifications, industry practice, and health and safety and environmental requirements 2.3 Determine cable route between rack and sub-rack and cable termination point to comply with client requirements, site limitations, equipment specifications and regulations 2.4 Install cabling infrastructure to interface rack and sub-rack according to installation instructions 2.5 Complete cabling requirements to support installation of equipment
3. Install equipment and earthing protection	3.1 Install lightning protection equipment where required, according to manufacturer's specifications and industry practice 3.2 Install earthing protection and line conditioning where required, according to relevant Australian Communications and Media Authority (ACMA), local power company and industry practice 3.3 Install equipment component into rack and sub-rack and complete connections according to manufacturer's specifications and compliance with warranty requirements
4. Perform tests	4.1 Power-on test individual equipment items 4.2 Visually check that all connections and interconnections are firm and sound 4.3 Electrically test all terminations for continuity according to enterprise guidelines
5. Complete project	5.1 Install labels to new equipment and radiation warning signs, where

ELEMENT	PERFORMANCE CRITERIA
documentation	required, according to enterprise guidelines 5.2 Record test results for future reference, complete reports on equipment installation and amend design to reflect existing cable layout and equipment according to enterprise requirements 5.3 Recover obsolete materials and return to appropriate point for disposal 5.4 Restore site according to requirements of enterprise or approving authority and to client satisfaction 5.5 Notify appropriate personnel of job completion 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	1.1, 1.2, 1.4, 1.6, 2.2, 2.4, 3.1-3.3, 5.4	- Analyses and consolidates test results and data from a range of sources, against defined criteria and requirements - Reads and interprets plans, specifications and other documentation from a variety of sources and consolidates information to determine requirements
Writing	1.2, 1.3, 2.1, 5.1, 5.2, 5.5	- Prepares documentation and correspondence using clear language and correct spelling and terminology - Documents outcomes and changes to plans using industry relevant terminology and recognised plan symbols
Oral Communication	1.2, 1.3, 1.6, 1.7, 5.4, 5.5	Interacts effectively in verbal exchanges using active listening, questioning and reading of verbal and non-verbal signals to convey and clarify information
Numeracy	2.3-2.5, 3.1-3.3, 4.1, 4.3	- Makes calculations appropriate for measuring and estimating materials for construction - Takes measurements and uses them for work layout and construction - Performs mathematical calculations to check, interpret and confirm results of system tests
Navigate the world of work	1.6, 2.2-2.4, 3.1-3.3, 4.3, 5.1, 5.2, 5.4	- Takes personal responsibility for following explicit and implicit policies, procedures and legislative requirements - Identifies and acts on issues that contravene relevant policies, procedures and legal requirements

Interact with others	1.2, 1.3, 1.6, 1.7, 5.4, 5.5	• Uses a range of strategies to establish a sense of connection and build rapport with clients and co-workers • Recognises and accommodates basic differences and priorities of others
Get the work done	1.1, 1.2, 1.4-1.8, 2.1-2.5, 3.1-3.3, 4.1-4.3, 5.1, 5.3, 5.4	• Takes responsibility for planning, sequencing and prioritising tasks and own workload for efficiency and effective outcomes • Makes decisions and implements procedures for routine tasks, using formal decision making processes for more complex and non-routine situations. • Addresses problems and initiates standard procedures in response, applying problem solving processes in determining a solution

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTCBL314 Install network cable equipment	ICTCBL3069A Install network cable equipment	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 ICTCBL314 Install network cable equipment

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Performance Evidence

Evidence of the ability to:

- prepare for installation of network cable equipment
- provide cable infrastructure
- install cable equipment support structure for power, alarms and interrogation requirements
- install equipment, test and interpret test results
- label equipment correctly
- safely use any specialised hand or power tools and equipment
- apply regulations and standards related to the installation
- comply with all related health and safety requirements and work practices.

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:

- identify and select cabling types, connectors and cabling structures
- identify connections to carrier infrastructure or equipment, such as main distribution frame (MDF) or customer interface units (CIU)
- describe the network cable installation requirements for the client's equipment
- define the electrical and/or optical properties to be measured
- identify the health and safety considerations including:
 - electrical safety
 - lifting hazards
 - manufacturer's requirements for safe operation of equipment
- describe the test methods and performance requirements to be used
- identify the typical issues and challenges that occur on the worksite
- describe the purpose of warranties and service level agreements.

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 must be typical of those experienced in the telecommunications – cabling field of work and include access to:

- a site where installation of network cable equipment may be conducted
- plant, tools and equipment currently used in industry
- relevant regulatory and equipment documentation that impacts on work activities.

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

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