



Australian Government

ICTCBL301 Install, terminate and certify structured cabling installation

Release: 2

ICTCBL301 Install, terminate and certify structured cabling installation

Modification History

Release	Comments
Release 2	This version released with ICT Information and Communications Technology Training Package Version 5.0.
Release 1	This version released with ICT Information and Communications Technology Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to place, secure and terminate structured cabling for indoor and outdoor installations and to certify the installation within a domestic, commercial or industrial client's premises.

It applies to technical staff who install, terminate and certify structured cabling installations for communications applications including digital and analog, telephony, data, video, digital broadcasting, computer networks, local area networks (LAN), wide area networks (WAN) and multimedia.

All client cabling work in the telecommunications, fire, security and data industries must be performed by a registered cabler. All cablers are required to register with an Australian Communications and Media (ACMA) accredited registrar.

The ACMA Pathways for Cabler Registration of Specialist Competency ICTCBL301 requires completion of ICTCBL247 and a WHS/OHS unit.

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 of structured	1.1 Confirm client requirements and ensure compliance with relevant legislation, codes, regulations and standards

ELEMENT	PERFORMANCE CRITERIA
cabling	1.2 Arrange access to site according to required procedure 1.3 Inform appropriate personnel of identified safety hazards on worksite 1.4 Organise tools and cabling products equipment for given work 1.5 Erect barriers according to safety requirements 1.6 Select cable type and match structured cabling to installation environment and client requirements 1.7 Verify proposed route to meet manufacturer's specifications and industry standards
2. Install structured cable	2.1 Place and secure correct type of cable following work health and safety (WHS) and environmental requirements, and according to accepted industry practice and standards 2.2 Maintain cable and services separations in runs and cross overs to meet manufacturer and industry standards 2.3 Install structured cabling to industry standards 2.4 Minimise twist ratio defects to avoid accumulation effect on structured cable performance 2.5 Fit over-voltage protection devices to all cables and metallic components where required
3. Terminate structured cable	3.1 Terminate cable according to accepted industry practice and standards 3.2 Maintain correct twist ratio to optimise system performance at rated level 3.3 Use correctly rated termination hardware with appropriate termination tool to ensure integrity and performance of termination 3.4 Earth cable shield to manufacturer's specifications and relevant industry standards if applicable
4. Certify system performance to required level and complete documentation for client	4.1 Test installation and termination to comply with certification requirements 4.2 Record and verify system performance promptly where required 4.3 Authorise and issue appropriate documentation to client to certify system performance and complete records where required 4.4 Reinstate site to client's satisfaction and dispose of waste in environmentally safe manner 4.5 Notify client and obtain sign off

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	- Integrates new ideas and information with existing understanding - Recognises the structures and distinguishing features of a range of familiar text types
Writing	Sequences writing to produce cohesive text
Oral Communication	Uses clear language and concepts, and tone and pace appropriate for the audience and purpose
Numeracy	Interprets and comprehends whole numbers and familiar or routine fractions, decimals and percentages
Navigate the world of work	Takes personal responsibility for adherence to legal and regulatory responsibilities relevant to own work context, and draws attention to any issues that may affect self or others
Interact with others	Recognises the purpose of various communications directly relevant to own role
Get the work done	- Implements actions as per plan, making slight adjustments if necessary, and addressing some unexpected issues - Automatically implements standard procedures for routine decisions in response to familiar problems - Understands when to take responsibility and when to notify others

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Over-voltage protection devices requirements must comply with:	- ACMA standards - enterprise or local environmental hazard - manufacturer's specifications.
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTCBL301 Install, terminate and certify structured cabling installation	ICTCBL301 Install, terminate and certify structured cabling installation	Updates to application, performance evidence, and range of conditions. Updated 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>

Assessment Requirements for ICTCBL301 Install, terminate and certify structured cabling installation

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- install, terminate and certify a structured cabling installation to industry standards, applying related work health and safety (WHS) requirements and work practices
- install and test the following UTP (Cat 6, Cat 6A & Cat 7) and FTP (Cat 6 2x2)
- install termination hardware
- conduct a termination test and interpret the results
- verify compliance with manufacturer's installation specifications and warranties
- provide a report certifying the installation and test results to the client.

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

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- Australian Communications and Media Authority (ACMA) competency requirements for Telecommunications Cabling Provider Rules
- legislation, codes of practice and other formal agreements that impact on the work activity
- application of industry standards on cable bending, anchors, tension, twist and labelling
- tools and equipment commonly used in cable installations and testing
- features and operating requirements of test equipment
- types and structure of cable and termination hardware used in communications installations

- information required to operate equipment according to a test specification
- identify the manufacturer's requirements for safe operation of equipment
- identify specific WHS hazards and requirements relating to the activity and site conditions
- test methods and performance requirements
- different types of records and documentation that may be required for certification and reporting
- typical issues and challenges that occur on site.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- sites where installation, termination and certification of structured cabling may be conducted
- testing equipment currently used in industry
- relevant regulatory and equipment documentation that impacts on installation.

Note: All client cabling work in the telecommunications, fire, security and data industries must be performed by a registered cabler. All cablers are required to register with an Australian Communications and Media (ACMA) accredited registrar. Assessment by a Telecommunications Industry Training Advisory Board (TITAB) registered assessor is recommended for this unit.

Assessors of this unit must satisfy the requirements for assessors 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>