

<b>Title</b>	<b>Install, test and fault find structured cabling for complex network systems and services</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	<p>This standard is intended for technicians who work on complex telecommunications networks.</p> <p>People credited with this unit standard are able to prepare for, install, test and fault find structured cabling for complex network systems and services.</p>
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<b>Classification</b>	Telecommunications > Telecommunications - Service Delivery
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<b>Available grade</b>	Achieved
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### Guidance Information

- Learning and assessment within this unit standard must be carried out in accordance with the following legislation, guidelines, and codes of practice, as relevant to role, and any subsequent amendments:
  - New Zealand Telecommunications Forum Inc., Customer Complaints Code, available from <https://www.tcf.org.nz/industry/resources/publications/industry-standards-guides/>
  - Health and Safety at Work Act 2015
  - Privacy Act 2020
  - Resource Management Act 1991
  - Telecommunications Act 2001, all available from <http://legislation.govt.nz/>.
- Definitions
 

*Complex* refers to three or more components and/or services used together in networks or enterprise solution systems.

*Customer* refers to internal and external customers to the organisation and may include but are not limited to vendors/suppliers, business partners, the public, government, service providers, team members, network owners.

*Industry practice* refers to practices that competent technicians within the industry recognise as current industry best practice.

*Specifications* refer to detailed job specifications, drawings, instructions, manufacturer's specifications and instructions or any employer or company specifications.
- For the purpose of this unit standard, assessment can take place in a core network, access network, or wireless technology telecommunications work environment.
- Range
 

Evidence for three different worksites is required.

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## Outcomes and performance criteria

### Outcome 1

Prepare for installation of structured cabling for complex network systems and services.

#### Performance criteria

- 1.1 Scope and timing of installation work is determined in accordance with specifications and customer requirements.
- 1.2 Cables and a structured cabling system are confirmed in terms of suitability and alignment with specifications and industry practice.
- 1.3 Service entrances, terminating facilities and equipment rooms are confirmed in accordance with the installation plan.
- 1.4 Installation plan is developed and confirmed with the customer and supervisor.  
  
Range        available resources, required materials, timing, and site access.
- 1.5 Materials are obtained from stock and delivered to site in accordance with industry practice.

### Outcome 2

Install structured cabling for complex network systems and services.

#### Performance criteria

- 2.1 Fitting, mounting, location, and positioning of hardware is completed in accordance with specifications and industry practice.  
  
Range        hardware may include but is not limited to – cable trays, ducting, terminating blocks, cabinets, frames, connectors, catenary wiring.
- 2.2 Earthing, bonding, and protection is completed in accordance with specifications and industry practice.
- 2.3 Cables are installed, terminated, and labelled in accordance with specifications and industry practice.
- 2.4 Fire-stopping products are installed in accordance with regulatory requirements and industry practice.
- 2.5 Installation progress documentation is maintained in accordance with the installation plan.
- 2.6 Drawings are marked up to reflect the as-built situation in accordance with industry practice.

- 2.7 Site restoration is carried out in accordance with specifications and industry practice.

### Outcome 3

Test and fault find structured cabling for complex systems and services.

### Performance criteria

- 3.1 Visual inspection confirms that all specified items are installed to specifications.
- 3.2 Testing confirms that all cables interconnect with the specified terminations in accordance with industry practice.
- 3.3 Basic acceptance tests for the cabling system are completed in accordance with specifications and industry practice.
- 3.4 Faults are identified and located by logical interpretation of test results and rectified in accordance with industry practice.
- 3.5 Test results are confirmed in accordance with specifications, and company requirements.

<b>Planned review date</b>	31 December 2025
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### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	23 May 2019	N/A
Rollover and Revision	2	25 January 2024	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0101
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

### Comments on this unit standard

Please contact Waihangara Ara Rau Construction and Infrastructure Workforce Development Council [qualifications@waihangaraarau.nz](mailto:qualifications@waihangaraarau.nz) if you wish to suggest changes to the content of this unit standard.