

40115 Terminate and test data cables

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| Kaupae Level | 3 |
| Whiwhinga Credit | 15 |
| Whāinga Purpose | <p>This skill standard recognises the skills required to terminate and perform basic connectivity tests on data cables in medium to large complex environments.</p> <p>This skill standard aligns with the New Zealand Certificate in Data Cabling (Level 3) [Ref: 5057].</p> |

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

| Hua o te ako Learning outcomes | Paearu aromatawai Assessment criteria |
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| 1. Terminate data cables. | a. Shielded and unshielded twisted pair cables are terminated to patch panels and field outlets according to plans and technical specifications. |
| | b. Shielded solutions are bonded according to technical specifications. |
| | c. Patch panels and field outlets are labelled according to plans or client requirements. |
| | d. Cable management is implemented within communications cabinets or racks according to plans or industry best practice. |
| | e. Accurate as-built site markup documentation is created. |
| 2. Test terminated cables and repair basic faults. | a. Basic tests are performed on terminated cables between the field outlet and patch panel or cabinet using appropriate testing equipment. |
| | b. Basic faults are identified, diagnosed, and repaired. |

Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

Assessment specifications:

Assessment evidence must be from workplaces where the scope of work provides the opportunity to demonstrate the skills and knowledge in medium to large complex environments containing multiple patch panels, a cabinet or rack, and multiple field outlets.

Basic faults include continuity, failed wire map, and cable pair untwist.

Basic tests include continuity, failed wire map, and cable pair untwist.

Medium to large complex environments may include hotels, hospitals, prisons, schools, universities, factories, multi-room office buildings, data centres, shopping malls that may be 200m² or larger.

Assessment evidence for this standard must comply with relevant legislation, technical standard AS/NZS 11801, industry standards, and meet worksite health and safety requirements.

Ngā momo whiwhinga | Grades available

Achieved

Ihirangi waitohu | Indicative content

Safe working practices

- Protection from dust, paint, and other environmental contaminants.
- Working collaboratively with other trades while performing data cable termination tasks.

Tools

- Identification, safe and competent use, and maintenance of termination and testing tools.
- Selecting tools according to manufacturer's specifications.

Cabling plans

- Reading and understanding cable termination plans.
- Recording outlet numbers and adds/moves/deletions on a plan.
- Documentation for the as-built system including cabinet identification, communication outlet numbers and locations.
- Styles of cable management and purpose.

Terminating cables

- Terminating both unshielded and shielded twisted pair cables.
- Termination of outlets, within open racks and enclosed cabinets.
- Shielded jacks, shielded patch panels, and enclosure bonding requirements.
- Wire termination schemes 568A, 568B and voice.
- Labelling patch panels and outlets.
- Selecting appropriate tools according to manufacturer's product requirements.
- Application and purpose of RJ45 and MPTL connections.
- Industry standards and manufacturers standards.
- Termination of outlets in the field including consolidation points and Multi-User Telecommunications Outlet Assembly (MUTOA).

Testing

- Handling, charging, and operating basic test equipment.
- Performing basic testing between outlet and panel or cabinet and analysing test results.
- Reasons for testing and procedure for failed tests.
- Basic fault finding, repairing basic faults, and recording test results.

Rauemi | Resources

- Standards available from www.standards.govt.nz.
 - AS/NZS 11801.1:2019 Information Technology – Generic cabling for customer premises: Part 1: General requirements.

Pārongo Whakaū Kouna | Quality assurance information

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| Ngā rōpū whakatau-paerewa Standard Setting Body | Waihanga Ara Rau Construction and Infrastructure Workforce Development Council |
| Whakaritenga Rārangi Paetae Aromatawai DASS classification | Engineering and Technology > Telecommunications > Telecommunications - Service Delivery |
| Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR | CMR 0101 |

| Hātepe Process | Putanga Version | Rā whakaputa Date | Rā whakamutunga mō te aromatawai Last date for assessment |
|--|--------------------------|----------------------------|--|
| Rēhitatanga Registration | 1 | 27 June 2024 | N/A |
| Kōrero whakakapinga Replacement information | N/A | | |
| Rā arotake Planned review date | 31 December 2029 | | |

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihangaararau.nz if you wish to suggest changes to the content of this skill standard.