

Title	Carry out installation, testing, commissioning and configuration of complex network systems and services		
Level	4	Credits	20

Purpose	<p>This standard is intended for technicians who work on complex telecommunications networks.</p> <p>People credited with this unit standard are able to carry out:</p> <ul style="list-style-type: none"> – installation of complex network systems and services – testing, commissioning and configuration of complex radio or cellular systems and services.
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Classification	Telecommunications > Telecommunications - Service Delivery
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Available grade	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.

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.

Outcomes and performance criteria

Outcome 1

Carry out the installation of complex network systems and services.

Performance criteria

- 1.1 Mounting of hardware, installation, and termination of cabling is carried out in accordance with specifications.
- 1.2 Feeder earthing and weather proofing of grounding kit is carried out in accordance with specifications.
- 1.3 Cabling is completed in accordance with specifications.
 - Range may include but is not limited to – labelling, securing, cable tray, trunking.
- 1.4 Mechanical fixing is completed in accordance with specifications.
 - Range may include but is not limited to – security, seismic resilience, fastening, appropriate work practices.
- 1.5 Ducting and support systems are installed in accordance with specifications.
- 1.6 Installation, implementation, and configuration of complex network systems and services are carried out in accordance with specifications and industry practice.

Outcome 2

Carry out testing and commissioning of complex radio or cellular systems and services.

Performance criteria

- 2.1 Equipment required to perform commissioning testing is used in accordance with specifications, and commissioning requirements.
 - Range testing may include but is not limited to – operational testing, acceptance testing, specification testing, performance verification.
- 2.2 Appropriate termination impedance is selected in terms of ensuring required tests do not impact on the performance of existing services.
- 2.3 Test results are evaluated and recorded against specifications.

Outcome 3

Carry out the configuration of complex radio or cellular systems and services.

Performance criteria

- 3.1 Configuration of hardware is carried out in terms of the requirements of the appropriate software for the service or system.
- 3.2 Configuration of hardware is completed in accordance with specifications.
- 3.3 Antenna alignment and coordination is completed, using test equipment in accordance with specifications.
- 3.4 Configuration and implementation of ICT and associated services is completed in accordance with specifications.

Planned review date	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

Consent and Moderation Requirements (CMR) reference	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 Waihanga Ara Rau Construction and Infrastructure Workforce Development Council qualifications@waihangaararau.nz if you wish to suggest changes to the content of this unit standard.