

<b>Title</b>	<b>Demonstrate knowledge of factors that can degrade the performance and stability of 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 demonstrate knowledge of factors that can degrade performance and stability of 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/>.
- Definition  
*Complex* refers to three or more components and/or services used together in networks or enterprise solution systems.
- For the purpose of this unit standard, assessment can take place in a core network, access network, or wireless technology telecommunications work environment.

### Outcomes and performance criteria

#### Outcome 1

Demonstrate knowledge of factors that can degrade performance and stability of complex network systems and services.

## Performance criteria

- 1.1 Factors that can degrade the performance of the network and network hardware are explained in terms of the techniques to mitigate them.
- 1.2 Factors that can degrade performance of broadcast systems are explained in terms of the techniques to mitigate them.
- 1.3 Modulation and multiplexing methods are compared in terms of reliability and stability of the network.
- 1.4 Network diversity and redundancy is explained in terms of network performance and stability.
- 1.5 Roles and responsibilities of other personnel are explained in terms of network performance, stability, documentation and software systems.
- Range personnel may include but are not limited to – National Operation Centre, IT, Engineers, Planners, Designers, Regulators, Standard setting bodies, Inspectors.
- 1.6 The importance of inventory systems and practices are explained in terms of recording factors that can degrade performance of the network.

<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@waihangaararau.nz](mailto:qualifications@waihangaararau.nz) if you wish to suggest changes to the content of this unit standard.