40046   Manage a simple network for an organisation

Kaupae	Level	5
Whiwhinga	Credit	15
Whāinga	Purpose	This skill standard is for people who want to learn how to manage simple networks in organisational contexts. It contributes to a broad understanding of core concepts and practical skills in Information Technology (IT) and is for those employed or seeking employment in technical support roles such as computer technicians and help desk and technical support officers. It can be used in programmes leading to the New Zealand Diploma in Information Technology Technical Support (Level 5) [Ref: 2596].

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

Hua o te ako	Learning outcomes	Paearu aromatawai	Assessment criteria
1. Evaluate network architecture for organisational use.	a. Apply network concepts and architecture to evaluate organisational requirements.
	b. Evaluate network protocols and models, topology, standards, network devices and services to meet an organisational need.
2. Design and implement a network infrastructure to meet identified organisational needs.	a. Design and build a network infrastructure, using appropriate network devices and cabling.
	b. Apply industry standards, policies, and best practices to design and build a network.
3. Troubleshoot a variety of network devices using appropriate tools and techniques.	a. Perform basic switch and router configurations and verifications using command-line interface (CLI).
	b. Apply knowledge of IP addressing and subnetting using IPv4 and IPv6 to resolve network related issues.
4. Apply a range of solutions to mitigate network security issues.	a. Evaluate potential security threats, vulnerabilities, and attacks.
	b. Identify security mitigation techniques.
	c. Configure network devices with device hardening features to mitigate security threats.

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

Assessment specifications:

The assessment must take place in a realistic practical setting which incorporates industry standard technologies relevant to current practice.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content

- Network concepts and architecture
    - o Reference models
    - o Topologies
    - o LAN and WAN
    - o IPv4 and IPv6
    - o Network Operations
- Network operating systems
    - o DNS
    - o Virtualisation
    - o Cloud networking concepts
- Designing Networks
- Industry standards, best practices, and network theory
- Network Troubleshooting
- Network Security
- Expected standards of behaviour for IT practitioners in New Zealand as outlined in the IT Professionals New Zealand Code of Ethics.

Rauemi | Resources

- The IT Professionals New Zealand Code of Ethics is available at https://itp.nz/practice-guidelines.
- Relevant legislation, accessible at https://legislation.govt.nz, includes but is not limited to:
    - o Copyright Act 1994
    - o Copyright (New Technologies) Amendment Act 2008
    - o Electronic Transactions Act 2002
    - o Harmful Digital Communications Act 2015
    - o Health and Safety at Work Act 2015
    - o Privacy Act 2020
    - o Unsolicited Electronic Messages Act 2007
    - o And any subsequent amendments.

Pārongo Whakaū Kounga | Quality assurance information

Ngā rōpū whakatau-paerewa | Standard Setting Body	Toi Mai Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai | DASS classification	Computing and Information Technology > Computing > Generic Computing
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga | CMR	0099

Hātepe | Process	**Putanga |** Version	**Rā whakaputa |** Review Date	**Rā whakamutunga mō te aromatawai |** Last date for assessment
Rēhitatanga | Registration	1	26 April 2024	N/A
Kōrero whakakapinga | Replacement information	N/A		
Rā arotake | Planned review date	31 December 2028		

Please contact Toi Mai Workforce Development Council at qualifications@toimai.nz to suggest changes to the content of this skill standard.