

Network Engineer

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| Reports to: | Data Science Platform Manager | Position Status: | Permanent |
| Business Unit: | GNS | Location: | Avalon |
| Department: | Data Science & Geohazards Monitoring | Date: | September 2025 |
| Direct Reports: | Nil | Budget & Delegated Authority: | Nil |
| Group: | Science & Commercial Operations | Career Step: | Specialist 2 / Band 7 |
| Job Family: | Operations, Data & Technology | Career Path: | Specialist |

Purpose

Support, operate, and improve GNS Science and GeoNet's resilient network infrastructure, spanning satellite, cellular, and terrestrial links - to ensure secure, high-availability connectivity from remote sensors through on-premise and cloud platforms. This role implements automated configuration management, applies network security standards, monitors performance, and works closely with science, operations, and platform teams to keep real-time earthquake, tsunami, and environmental geohazard data flowing.

Position Priorities and Responsibilities

- Build, configure, and maintain LAN/WAN and IoT sensor network segments across remote field sites, data centres, and cloud VPCs.
- Configure and support LTE/5G cellular and VSAT/BGAN satellite links; apply segmentation and access controls in line with standards.
- Implement firewall rules and changes (e.g., FortiGate) and contribute to security reviews and audits.
- Automation & Configuration Management - Build and maintain IaC (Ansible, Terraform) for all network devices; peer-review changes, enforce version control and automate deployments.
- Monitoring, Troubleshooting & Documentation - Continuously monitor link performance against expected performance, investigate and resolve outages, and maintain up-to-date network diagrams, runbooks and incident reports.
- Contribute practical feedback on new technologies (e.g., Starlink, 5G, cloud-native networking) and pilots that improve resilience and performance.
- Support engagement with ISPs, cellular and satellite providers (Spark, One NZ, Optus, Pivotal) for faults, changes, and upgrades.
- Share knowledge via documentation, show-and-tell sessions, and peer support; participate in an after-hours on-call roster if required.

Responsibilities of all Employees

- Comply with all relevant Business Unit policies, procedures and frameworks, and act in line with the relevant Business Unit values.
- Contribute to our healthy and safe workplace by following Health, Safety and Wellbeing (HSW) expectations outlined in and integrated into our operational practices and HSW Frameworks, including undertaking HSW training and participating in health monitoring programmes relevant to your work.
- Work effectively as a team member by fostering good relationships and supporting others by providing coverage of other functions as required and ensuring workloads are evenly spread.
- Have the flexibility to adapt and develop as the company and its environment evolves.

Key Working Relationships

| Internal | External |
|---|---|
| <ul style="list-style-type: none">• Platform team (implementation & operations).• Data Science & Geohazards Monitoring (data-flow needs).• NGMC and GNS IT (ops liaison).• DS&I/Operations (DC & cloud integration).• Accounting & Finance. | <ul style="list-style-type: none">• Telecommunications vendors (ISPs, VSAT, cellular).• Equipment suppliers (e.g., Optus, GoWireless) via procurement. |

Person Specification

Qualifications and Experience

Essential

- Bachelor's degree in Computer Science, Information Technology, Electrical/Network Engineering, or equivalent experience.
- 3+ years operating and supporting WAN/LAN environments, ideally including cellular and/or satellite links.
- Demonstrated use of version control (git) and scripting for network operations.
- Familiarity with network monitoring platforms and incident management practices.

Desirable

- Professional certifications (e.g., MikroTik MTCNA/MTCRE, AWS Networking Specialty, Cisco CCNP).
- Experience with Fortinet (FortiGate) and/or deeper AWS networking (TGW, DX, GWLB, IPv6 at scale).
- InfoSec credentials or training (e.g., ISO 27001, CISSP) and exposure to audit/compliance.

Skills, Knowledge and Attributes

- **WAN/LAN & Access Links:** Strong knowledge of routing and tunnelling (BGP, OSPF, WireGuard, IPsec), HA (VRRP), VLANs, QoS, NAT; familiarity with cellular and satellite constraints (MTU, jitter, CGNAT).

- **MikroTik/RouterOS:** Hands-on experience operating RouterOS (v7 preferred) in production.
- **Cloud & Security:** Working knowledge of AWS networking (VPC, TGW, S2S VPN/DX, IPv6), firewall configuration and segmentation.
- **Automation:** Scripting (Python/Bash/Go) and experience with git; exposure to Ansible/Terraform is preferred.
- **Collaboration:** Clear communicator who can translate technical details for non-technical stakeholders and work cross-functionally.
- **Documentation:** Habit of maintaining accurate diagrams, runbooks, and change history.