



POSITION DESCRIPTION

Cryptologic Engineer – Level 2

Unit/Branch, Directorate: Engineering Northern or Southern, Technology Directorate

Location: Wellington, Auckland, Christchurch or Waihopai

Salary range: H \$77,711 - \$116,567

Purpose of position: The Cryptologic Engineer (L2) assists with the development, delivery and maintenance of cryptologic business technology solutions including; information technology hardware, computer processing and storage, software integration and systems management, and network engineering services.

Our mission at the GCSB is to protect and enhance New Zealand's security and wellbeing.

Our values are Respect, Commitment, Integrity and Courage

Technology Directorate purpose: The Technology Directorate delivers technology for GCSB, NZSIS and the wider intelligence and security sector. The directorate's purpose is to ensure that mission requirements are met today and in the future, targeting relevant strategic objectives. The directorate's work encompasses engineering, data/information management, end-user support, software development, service delivery management, project management, provision of cryptographic infrastructure, and more. The directorate operates in service and capability terms – e.g. attending to policy, process and implementation pre-requisites as much as pure technology or particular systems. The Directorate leads information management for GCSB, including in compliance terms.

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Key accountabilities	Deliverables/Outcomes
<p>Cryptologic Engineering</p> <ul style="list-style-type: none"> • Participating in system design and implementation for GCSB and NZSIS business infrastructure through the application of technology and tradecraft • Proactive research and assessment of the potential benefits and/or impact of new developments in cyber and commercial technology relevant to the GCSB and NZSIS business outcomes • Being a subject matter expert for assigned systems and technology • Contributing to cryptologic system engineering tradecraft and institutional knowledge 	<ul style="list-style-type: none"> • Equipment and systems are installed and maintained to a high standard • Capability, processes, designs and engineering tradecraft are aligned with business requirements and continually improved • New 'first of' technical capability refinements are implemented in an approved and risk managed manner • Expertise within nominated lead area is maintained and demonstrated as required
<p>Documentation</p> <ul style="list-style-type: none"> • Ensuring system documentation is prepared and maintained to a suitable standard for certification and accreditation • Business processes are appropriately followed and recorded to add to the corporate knowledgebase 	<ul style="list-style-type: none"> • Knowledge within nominated lead area is documented and effectively transferred to the organisation through system documentation, operating procedures and technical reports • Systems are documented to the required standard for certification • Documentation is maintained at the necessary detail and accuracy to contribute to lifecycle support
<p>Project Management</p> <ul style="list-style-type: none"> • Managing projects to the necessary standard working to an approved methodology • Contribute expertise to GCSB and NZSIS projects as required 	<ul style="list-style-type: none"> • Projects are managed according to best practises with deliverables cleanly transitioned to the customer • Training and lifecycle support mechanisms are in place • Project objectives are completed within agreed timeframes
<p>Technical Design</p> <ul style="list-style-type: none"> • Elaboration of system design and architecture specifications • Providing technical advice and guidance to other capability development units on the integration of capabilities and end-to-end system performance • Providing credible engagement with manufacturers, suppliers and service providers as required • Having a sound understanding of GCSB and NZSIS legislation and supporting compliance policies, and how this applies to technical capabilities 	<ul style="list-style-type: none"> • Complex technology is implemented maximising the desired business benefit with minimal adverse unintended consequences, and in accordance with approved architectural principles • Customers and counterparts value the business benefits derived from the delivered capabilities • The technical credibility of the GCSB and NZSIS is raised through engagement with the wider sector



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<p>Subject-matter Expertise</p> <ul style="list-style-type: none"> • Being recognised as a subject matter expert on a system and being able to speak to audiences on most technical and professional subjects • Demonstrating the GCSB values and acting as a role model • Contributing to business planning at section, unit and/or directorate level • Supporting team members to achieve objectives and establish solution based outcomes • Undertaking research in areas likely to be of technological significance to the GCSB and NZSIS 	<ul style="list-style-type: none"> • Acts as an advisor on matters relating to field of expertise internally and/or externally • Is acknowledged as an expert resource in area of expertise • Represents the GCSB and NZSIS at conferences or working groups as required • Is called on for, and makes contribution to, business planning up to Directorate level on area of expertise
<p>Health and safety (for self)</p> <ul style="list-style-type: none"> • Work safely and take responsibility for keeping self and colleagues free from harm • Report all incidents and hazards promptly • Know what to do in the event of an emergency • Cooperate in implementing return to work plans • Be a visible role model at all times • Follow GCSB's safety rules and procedures 	<ul style="list-style-type: none"> • A safe and healthy workplace for all people using our sites as a place of work • All requirements in the NZIC Health and Safety policy and procedures are met
<p>Information and Data Management</p> <ul style="list-style-type: none"> • Understand and comply with requirements to keep full and accurate records • Understand and comply with requirements to appropriately access and handle intelligence reporting and data • Follow GCSB's and NZSIS' rules and procedures for information management and handling 	<ul style="list-style-type: none"> • The Agencies requirements for evidence of their activities and decisions are met • Access to, use of and sharing of information and data is managed appropriately in line with legal and business requirements
<p>Other duties</p>	<p>Any other duties that fall within the scope of the position</p>

Position delegation	
Financial delegation:	None

Key stakeholders	
Internal:	<ul style="list-style-type: none"> • GCSB and NZSIS staff
External:	<ul style="list-style-type: none"> • Vendors and industry partners • Wider sector customers

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	<ul style="list-style-type: none"> • Partner agencies • Telecommunications service providers
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Person Specification	
Experience:	<ul style="list-style-type: none"> • Minimum five years relevant experience in the Computing, Information Technology, Electrical or Telecommunications industry.
Knowledge and Skills:	<ul style="list-style-type: none"> • At least one of: <ul style="list-style-type: none"> ○ Infrastructure management skills and experience including: Virtualisation technologies, Microsoft Windows, Unix (Linux), replication/backup and recovery management, SAN, storage management, system monitoring, equipment installation, cooling and electrical resilience. ○ System skills and experience including: Microsoft Windows, Unix (Linux), Active Directory, PKI, desktop virtualisation, mail servers, web servers, database administration, web collaboration tools, automation tools, cloud technologies, scripting. ○ Networking skills and experience including: TCP/IP, Telephony and VTC systems, LAN, WAN management, switching, firewalls, routing protocols and network security. • Self-motivated with excellent planning and organisational skills; and the ability to prioritise tasks to meet deadlines and effectively manage changing priorities • Excellent interpersonal skills with the ability to liaise confidently and professionally with a diverse range of people • Professional customer orientation with a strong commitment to providing a high standard of customer service • A high level of accuracy and attention to detail • Agile, adaptable and flexible • Good written and oral communication skills, with the ability to listen and correctly interpret instructions • Proven ability to work independently using sound judgement and initiative; and

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	collectively within a team environment
Qualifications and Courses:	<ul style="list-style-type: none">• NZQA Level 6/7 or equivalent• Tertiary degree in computer science or engineering majoring in telecommunications or electronics or equivalent (e.g. NZCE with relevant work experience)
Specific Job Requirements:	<ul style="list-style-type: none">• Ability to obtain and maintain a TSS security clearance

NZIC Competencies

In addition to the Person Specification above, competency standards which outline the development requirements of the position are set out under the NZ Intelligence Community (NZIC) Career Pathways framework. The Career Pathways framework enables progression within the job.

Full descriptions of progression competencies and an overview of the NZIC Career Pathways framework is available on appointment.

The position is aligned to the Information Engineering competency framework.

Changes to Position Description

Positions in the GCSB may change over time as the organisation develops. Therefore we are committed to maintaining a flexible organisation structure that best enables us to meet changing market and customer needs. Responsibilities for this position may change over time as the job evolves. This Position Description may be reviewed as part of planning for the annual performance cycle.

Date PD reviewed: 1/07/2018

Signatures		
Manager's Name		
Signature		Date:
Employee's Name		
Signature		Date: