



JOB DESCRIPTION

Post Details:

Post Title:	Principal Solution Engineer	Organisational Element:	Command and Control Centre
		Job Family:	Application Engineering
Rank/Grade:	G20		
Military/Civilian:	CIV	Location:	The Hague, NL

Organisation context:

This is a position within the NATO Communications and Information Agency (NCIA), an organization of the North Atlantic Treaty Organization (NATO).

To strengthen the Alliance through connecting its forces, the NCIA delivers secure, coherent, cost effective and interoperable communications and information systems in support of consultation, command & control and enabling intelligence, surveillance and reconnaissance capabilities, for NATO, where and when required. It includes IT support to the Alliances' business processes (to include provision of IT shared services) to the NATO HQ, the Command Structure and NATO Agencies.

Organisational Element Statement of Functions:

The Command and Control (C2) Business Area is responsible for planning and executing all lifecycle management activities (design, transition and operations) for Joint/Maritime/Land C2 services (including: subject matter expertise; research and development; software engineering; acquisition; operations and maintenance and disposal) in the following C2 Community of Interest (COI) technical service areas: Land, Maritime, Joint, Special Operations, Logistics, Medical, Military Engineering, Military Messaging, Nuclear, CBRN, Military Messaging, Situational Awareness, Operations Planning and Collective Training and Exercise Support (CTX).

Job Role Description:

Solution Engineers are domain specific technical experts that translate capability requirements into implementation plans, designs and development activities. They select, design and implement solutions to requirements within a given application domain. They derive solution requirements and designs from capability requirements and architectures. Solutions, designs, and implementations encompass products, product components, encompassing software, hardware, network, data, documentation and development/test environments. They evaluate supplier's technical solution and to manage selected interfaces of that solution.

Duties and Responsibilities:

Solution Architecture

- Leads the development of architectures for complex solutions ensuring consistency with agreed requirements.
- Establishes policies, principles and practices for the selection of solution architecture components.
- Manages trade-offs and balances functional, service quality and systems management requirements within a significant area of the organisation.
- Communicates proposed decisions to stakeholders.
- Coordinates and manages the target architecture across multiple projects or initiatives.
- Maintains a stable, viable architecture and ensures consistency of design and adherence to appropriate standards across multiple projects or initiatives.

Requirements Definition and Management

- Plans and drives scoping, requirements definition and prioritisation activities for large, complex initiatives.
- Selects, adopts and adapts appropriate requirements definition and management methods, tools and techniques.
- Contributes to the development of organisational methods and standards for requirements management.
- Obtains input from, and agreement to requirements from a diverse range of stakeholders.
- Negotiates with stakeholders to manage competing priorities and conflicts.
- Establishes requirements baselines.
- Ensures changes to requirements are investigated and managed.

Systems Development Management

- Sets policy and drives adherence to standards for systems development.
- Leads activities to make security and privacy integral to systems development.
- Identifies and manages the resources necessary for all stages of systems development projects.
- Ensures that technical, financial and quality targets are met.

Network Design

- Produces, or approves network providers', network architectures, topologies and configuration databases for own area of responsibility.
- Specifies design parameters for network connectivity, capacity, speed, interfacing, security and access, in line with business requirements.
- Assesses network-related risks and specifies recovery routines and contingency procedures.
- Creates multiple design views to address the different stakeholders' concerns and to handle both functional and non-functional requirements.

Sourcing

- Plans and manages procurement activities.
- Manages tender, evaluation and acquisition processes.
- Researches suppliers and markets, and maintains a broad understanding of the commercial environment, to inform and develop commercial strategies and sourcing plans.
- Advises on the business case for alternative sourcing models.
- Advises on policy and procedures covering tendering, the selection of suppliers and procurement.
- Negotiates with potential partners and suppliers, developing acceptance criteria and procedures.
- Drafts and places contracts.

Contract Management

- Oversees and measures the fulfilment of contractual obligations.
- Uses key performance indicators to monitor and challenge performance and identify opportunities for continual improvement.
- Develops strategies to address under-performance and compliance failures, including the application of contract terms.
- Identifies where changes are required, evaluates the impact, and advises stakeholders about the implications and consequences.
- Negotiates variations and seeks appropriate authorisation.
- Actively supports and engages with experts and stakeholders to ensure continual improvements are identified through review and benchmarking processes.
- Develops and implements change management protocols.

Additional Duties for This Post

Product Ownership and Capability Development Operations Planning, Land C2 and CBRN

- Act as Product Owner/Product Manager for multiple complex software applications, managing their full lifecycle from concept through delivery, sustainment, and eventual retirement;
- Responsible for product roadmaps and keeping them aligned with operational needs, stakeholder priorities, and broader strategic goals;
- Coordinate cross-functional delivery teams, balancing competing priorities and ensuring solutions meet business, user, and technical requirements;
- Ensure user needs are translated into actionable backlog items with traceability to operational and system-level requirements;
- Lead the prioritisation of features and capabilities in close collaboration with operational stakeholders, developers, and acquisition teams.

Military Domain Expertise and Operational Relevance

- Apply in-depth understanding of military planning processes, preferably within NATO or national defence contexts, to ensure that capabilities align with operational doctrine and planning cycles;
- Integrate knowledge of operations planning, land operations, Chemical, Biological, Radiological and Nuclear (CBRN) functions and Command and Control (C2) principles into solution design and capability development;
- Serve as the primary liaison between operational users and technical development teams to ensure solutions are practical, scalable, and mission-effective.

Systems Integration and Software Project Leadership

- Guide the architecture and integration of complex software applications, with a focus on interoperability, scalability, and resilience;
- Oversee requirements engineering, interface control, and system performance metrics to ensure integrated solutions meet functional and non-functional needs;
- Lead the technical and architectural aspects of large-scale software projects, ensuring adherence to timelines, budgets, and quality standards;
- Manage risks associated with capability development, proactively identifying dependencies, constraints, and opportunities for early mitigation.

Industry and Acquisition Engagement

- Engage with external industry partners and suppliers, contributing to the development of technical specifications, statements of work, and evaluation criteria;
- Provide technical leadership during industry studies, proof-of-concepts, and prototype evaluations;
- Ensure industry solutions are aligned with architectural principles, security requirements, and interoperability frameworks;
- Support acquisition strategies, including cost estimation, performance trade-offs, and lifecycle planning.

Leadership, Communication, and Governance

- Represent the architecture and capability development community in senior-level forums, working groups, and decision-making boards;
- Provide briefings and documentation tailored to both technical and non-technical audiences, clearly articulating complex issues, trade-offs, and decisions;
- Contribute to the development and enforcement of architectural governance, guiding compliance with NATO or enterprise-wide technical standards and frameworks.

Education, Experience and Training (essential):

A Master's degree at a nationally recognised/certified university in a related discipline and 5 years post-related experience. Or a Bachelor's degree with 8 years post related experience.

Experience

- Demonstrated experience acting as Product Owner, Product Manager or equivalent role for complex software systems, including managing roadmaps, backlogs, and stakeholder priorities across multiple concurrent development streams;
- Strong understanding of military planning processes or land operations, with practical experience applying this knowledge to capability development or operational support;
- Substantial experience working with command and control capabilities, including their architecture, integration, and operational use in joint or land-focused contexts;
- Proven ability to lead or significantly contribute to the delivery of complex software-based capabilities, from requirements capture through architecture, development, and fielding;
- Hands-on experience designing, evaluating, and integrating system architectures, with specific emphasis on interoperability, scalability, and security in federated or multinational environments;
- Demonstrated ability to understand software logic, architecture, and system behaviour, including working knowledge of programming principles and structured problem-solving;
- Ability to read and interpret code and contribute to solution development using at least one modern programming or scripting language at a basic level (e.g., Python, Java, C++, JavaScript);
- Understanding of relational or NoSQL database concepts, data models, and structured data representation relevant to system design and integration;
- Demonstrated ability to work closely with senior stakeholders, operational users, developers, and acquisition staff to translate strategic needs into technical solutions;
- Practical experience working with defence industry partners, including technical input to Statements of Work, proposal evaluations, and vendor oversight or similar experience as defence industry partner;
- Strong interpersonal skills with experience leading multi-disciplinary teams and delivering clear, effective communication across technical and non-technical audiences.

Training/Certifications

ITIL Foundation certified or knowledge.

Education, Experience and Training (desirable):

Education

N/A

Experience

- NATO or National Defence Context: Prior experience working within NATO, a national Ministry of Defence, or similar multinational defence environments, particularly in capability development or operational planning roles;
- Agile and Scaled Agile Environments: Familiarity with agile methodologies (e.g., Scrum, SAFe) and experience applying them to software-intensive defence programmes;
- Operational Experimentation and Validation: Involvement in concept development & experimentation (CD&E), field trials, or user validation exercises related to C2 systems or emerging capabilities;
- Emerging Technologies: Exposure to or participation in the evaluation and integration of emerging technologies relevant to C4ISR, such as AI/ML, data fusion, or cloud-based C2;
- Security and Interoperability Standards: Understanding of NATO or national defence information assurance standards, interoperability profiles (e.g., NISP, MIP), and service-oriented architectures;
- Ability to understand and contribute to software development processes, with working knowledge of programming logic, data structures, algorithms, and version control practices. Familiarity with at least one programming language (e.g., Python, Java, C++, JavaScript);
- Solid understanding of relational and/or NoSQL databases, data modelling, schema design, and structured data management, particularly in the context of integrated information systems;
- Acquisition and Procurement: Experience supporting capability acquisition programmes, including requirements definition, technical evaluations, and lifecycle cost considerations.

Training/Certifications

Relevant certifications such as TOGAF, ITIL, SAFe, or equivalent in architecture, project management, or product ownership.

Behavioural competencies:

- *Formulating Strategies and Concepts* - Works strategically to realise organisational goals; sets and develops strategies; identifies, develops positive and compelling visions of the organisation's future potential; takes account of a wide range of issues across, and related to, the organisation.

- *Entrepreneurial and Commercial Thinking* - Keeps up to date with competitor information and market trends; identifies business opportunities for the organisation; maintains awareness of developments in the organisational structure and politics; demonstrates financial awareness; controls costs and thinks in terms of profit, loss and added value.
- *Leading and Supervising* - Provides others with a clear direction, sets appropriate standards of behaviour, delegates work appropriately and fairly, motivates and empowers others, provides staff with development opportunities and coaching, recruits staff of a high calibre.

Language:

A thorough knowledge of one of the two NATO languages, both written and spoken, is essential and some knowledge of the other is desirable.

NOTE: Most of the work of the NCIA is conducted in the English language.

Travel:

Business travel to NATO and national (NATO and non-NATO) facilities as well as frequent travel between the NCIA offices;

May be required to undertake duty travel to operational theatres inside and outside NATO boundaries.

Work Environment:

Normal office environment;

Occasionally military exercise or operations environment.