



Principal Software Engineer

Team and Division	Reports to	Location	Date
Application Services, IST	Software Engineering Manager	Wellington	November 2024

OUR PURPOSE

Whakamana i te mauri hiko tū mai Aotearoa – Empowering the energy future for New Zealand.

TEAM PURPOSE

The Application Services group, within the Information Services and Technology Division, is responsible for managing Transpower's inventory of applications and integrations, including enterprise and critical systems - with a focus on the practical, and cost effective, integration of systems to meet business requirements through:

- Applications acquisition or development;
- Applications life-cycle management;
- Problem resolution; and
- Additions and enhancements.

Enterprise and critical systems include the Market Systems, Transmission applications, Core Finance, Asset Management, Information Management and HR systems. Application Services works under guidance of Strategy and Architecture to deliver products in accordance with enterprise standards.

The mission critical IT systems built and operated by the Applications Services team, are a key part of running the NZ electricity grid and electricity market in real time. The team is collaborative and results focused with a varied and full programme of work, with many interesting and critical projects.

ROLE PURPOSE

The Principal Software Engineer is a senior position that exists to provide application development services, including options analysis, design, development and lifecycle management of integration services as well as a focus on continuous improvement of those services and related processes.

The role provides technical direction, guidance and expertise relating to application and integration development and maintenance. Extensions to the role include business application development as well as developing and maintaining a DevOps approach across projects and BAU. In addition to software development, you will help to build our development capability, partnering with our vendors, designers and architects to help set the direction, approaches and standards used across the team.

KEY CUSTOMERS AND STAKEHOLDERS

Internal:

- Software Engineering Manager, Critical
- Software Engineering Manager, Enterprise
- Design Manager Critical
- Application Platform Manager
- other groups within Critical Apps
- other groups within IST
- groups within Operations
- other business divisions within Transpower

*External:*

- key partners and vendors
- outsource service providers
- contractors
- market systems stakeholders

DELEGATIONS**Budget:**

- N/A

Team:

- N/A

WHAT YOU ARE EXPECTED TO DELIVER***Requirements, Analysis, Design and Development***

- Assist Business Analysts with gathering information from users, documenting business requirements and developing user specifications
- Review and validate the feasibility of project business requirements
- Support the preparation of business cases
- Provide input to business cases for the RFI and RFP processes.
- Conduct applications performance analysis and develop performance improvement, and/or, remedial action plans
- Implement application enhancements as required
- Contribute to the creation of software development standards and guidelines creating consistency across the Critical systems applications
- Participate in development and design reviews
- Understand and contribute to software application architecture
- Follow secure development practices
- Work with Solution designers and architects to define and coordinate detailed application design and development for part or the entire solution to meet requirements
- Develop application code and actively manage the quality of the delivered code
- Champion the use of agile techniques and automated tooling for the development work and actively adopt the development pipeline established within the Critical Apps development environment
- Assist with the creation of detailed solution development plans and estimates
- Ensure that the deployment aspects of the proposed software solution are adequately considered during the solution design / development phase and appropriately used
- Ensure that the DevOps approach established during the project delivery phase is seamlessly transitioned to operations
- This role has a requirement for third level application support outside of business hours on an ad-hoc basis.

Technical Leadership

- Lead the enhancement of our in house development capability
- Lead continuous improvement of our development capabilities including people, tools, processes and standards along with the Architects and Designers in the team
- Provide mentoring and training to other team members in areas of expertise including UI, integration and software development
- Provide technical direction, and guidance to the technical team on the implementation of the design
- Participate in technical problem resolutions and the implementation of fixes within the project
- Act as an escalation point for technical issues within projects

***Engagement/Collaboration***

- Work with our application development partners and vendors to enhance our development practices and champion the use of proven methodologies and standards
- Proactively share specialist area of expertise with other members of the team, including providing cross functional assistance and expertise to other teams relating to software development
- Depending on the size of the project, the Principal Software Engineer may work with architects and other Software Engineers on the project and may produce all or parts of the design documentation (Solution Options, Solution Architecture Document and detailed design)
- Liaise with the enterprise domain architects (application, security and infrastructure architects), solution designers, end user subject matter experts and support personnel for any technical matters including any constraints imposed on design

Governance Assurance

- Provide rationale for the design decisions, balancing the concerns of the various stakeholders, driving down technical risks, balancing the need for cost effective solutions and ensuring that decisions are effectively communicated within the project
- Understand and adhere to Transpower's Enterprise Architecture
- Progress detailed solution designs through the design review process of Transpower's Solutions Delivery Lifecycle
- Assists in the assessment of technical project risks, developing mitigation strategies for these risks and communicating this information to the project manager
- Review and validate release notes, deployment plans and change requests

Quality Assurance and Testing Support

- Liaise with Test Manager/Analyst in reviewing of test plan to ensure appropriate coverage of functional and non functional testing
- Assist with the development, management and execution of test plans
- Conduct or lead agreed verification activities such code reviews and unit testing as agreed in the project plan to ensure that the implemented solution matches the design

Change Impact Assessment

- Assess the impact of changes to proposed solution design that arise during development. Advises on the implications of implementing the solution with these changes
- Assist managers of applications and operations staff in the resolution of technical issues associated with the provision of applications support and minor enhancements and alterations

Positive Team Contribution

- Consistently demonstrate Transpower's behaviours
- Encourage and support the immediate and wider team and divisions to deliver our strategic priorities
- Proactively identify and drive continuous business improvement
- Seize on the job learning opportunities
- Team up to build enterprise wide knowledge, cohesion and appreciation
- Be part of creating a culture of constructive feedback across all levels
- Perform other duties as required

Maintain Transpower's Health and Safety Culture

- Knowledgeable about Transpower's Health and Safety policies and procedures
- Know how to apply Health and Safety principles to achieve a safe and positive working environment
- Take personal responsibility for one's own health and safety and that of other employees and relevant stakeholders



- Take appropriate action to deal with workplace hazards and incidents in ways that comply with Health and Safety policies, procedures, systems and best practice
- Strive for continual improvement in Health and Safety performance
- Positively contribute to delivering a safe, zero harm workplace

KNOWLEDGE, SKILLS, EXPERIENCE

- 10 or more years of analysis and programming experience
- Experience leading application development, building development capability and championing the use of proven software development methodologies, standards and technologies to drive continuous improvements
- Experience working with applications DevOps tool-chains for continuous build, integration, packaging and deployment
- Demonstrated in-depth knowledge of a broad range of hardware and software products
- Experience with Design / Modelling Tools
- Enterprise Architect (UML 2.0)
- Experience with cloud platforms such as AWS or Azure(desirable)
- Java (must)
- .Net/C# (optional)
- Spring framework (Spring Boot, Security, Persistence / Data Repositories)
- Javascript Web Application Frameworks (optional)
 - Angular and/or React
- Oracle, Postgres, Neo4J Database (desirable)
- Experience with configuration management / provisioning tools
 - Ansible (desirable)
- Experience with Development Tools
 - Git (must)
 - IntelliJ Idea (desirable)
 - VSCode (desirable)
 - Atlassian Tool suite – Confluence, GitLab, GitLab CI/CD, Jira (desirable)
- Experience with Management Tools
 - Elastic Search, LogStash, Kibana (desirable)
 - Nagios (desirable)
 - Oracle Enterprise Manager (desirable)
 - Postgres Manager (desirable)

EDUCATION/QUALIFICATIONS

Essential

- Bachelor's degree in Information Systems or Computer Science or other related field, or equivalent work experience

LIVING OUR BEHAVIOURS

The behaviours we exhibit at Transpower have a direct impact on our ability to achieve our goals. As with all roles at Transpower, you'll live and breathe our Behaviours. Our behaviours are that when we work with each other, our customers, communities and the land we are ***Nimble and Considered, Inclusive and Decisive, Courageous and Caring*** to keep the lights on, and empower our energy future, for New Zealand.