# Position Details

## Research Projects- CSOF7

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| The following information is for applicants | |
| Advertised Job Title | Principal Software Engineer |
| Job Reference | 91444 |
| Tenure | Specified Term of 3 years  Full-time Remote |
| Salary Range | AU$146k - AU$161k per annum (pro-rata for part-time)  plus up to 15.4% superannuation |
| Location(s) | Remote any location within Australia |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidate |
| Position reports to the | Principal Project Manager and Team Lead |
| Client Focus – Internal | 50% |
| Client Focus – External | 50% |
| Number of Direct Reports | 5 |
| Enquire about this job | Contact Andrew Cook via email at Andrew.Cook@csiro.au |
| How to apply | Apply online at <https://jobs.csiro.au/>  Internal applicants please apply via **Jobs Central**  If you experience difficulties when applying, please email [careers.online@csiro.au](mailto:careers.online@csiro.au) or call 1300 984 220. |

**Acknowledgement of Country**

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our [vision towards reconciliation](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

### Role Overview

The role of Research Projects staff in CSIRO is to collaborate in scientific and technological activities with other research staff usually by assisting with detailed planning, undertaking or assisting with experimental, observational or technology development work, and in carrying out the more practical aspects of the work. At senior levels, Research Projects staff may be involved in providing consulting services, science and technology management and/or industry liaison.

The 4D Internet team are looking for a person to architect and help guide the scaling of our cloud platform. You will have professional experience in software development and be responsible for designing, securing, running and managing cloud-native workloads. Experience with 3D game engines (Unity, Unreal) will be highly regarded. You will be joining a small cross-disciplinary team who practises Continuous Delivery and Continuous Improvement, with a heavy investment in learning and advancement.

The right person will be an outcome-driven, analytical problem solver with excellent troubleshooting, stakeholder management and communication skills. This is coupled with a desire to learn and adapt to new & emerging technologies with a solid track record within the DevOps space.

We leverage heavy automation and containerisation in order to maximise our development time and minimise time spent on repetitive processes. The candidate would seek/identify and implement strategies to improve the team's overall delivery performance by decreasing our lead time to production safely and quickly.

The candidate will have excellent communication skills, a proactive attitude towards identifying bottlenecks in our value stream and work collaboratively towards a unified vision.

### Duties and Key Result Areas

1. Embrace change, become an expert in learning and take proactive steps to share knowledge
2. Work diligently to control, and improve the management of complexity
3. Design and develop quality software solutions that are demonstrably

* Secure
* Loosely coupled
* Well encapsulated
* Resilient
* Perform to specification

1. Treat the quality attributes of the system as first-class concerns (security, performance, throughput, and stability)
2. Adhere to team standards and participate in a culture of good engineering discipline and scientific rigour
3. Demonstrate designs that are SOLID and drive the development of the code base through TDD
4. Creating and maintaining reporting and dashboards to keep teams and stakeholders apprised of end-to-end health and status of the delivery pipeline
5. Identify weak signals in downstream processes and work to improve value stream feedback loops
6. Demonstrate high engagement in the entire lifecycle of product changes, from design to deployment and prioritize outcomes over output
7. Aggressively pursue automation opportunities to remove bottlenecks and hardship in the technology value stream
8. Ensuring environment provisioning is fully automated through Infrastructure as Code
9. Design solutions focused on the end users' experience, empathizing strongly with their problem space and delighting them with software that brings value into their lives
10. Work collaboratively with team members to help form shared knowledge and understanding of various domain problems
11. Become a passionate author, creating impactful documentation that is enjoyable and interesting to read
12. Contribute to a team culture of psychological safety and continuous learning
13. Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Zero Harm goals.
14. Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
15. Work collaboratively as part of a multi-disciplinary, regionally dispersed research team to carry out tasks in support of CSIRO’s scientific objectives.
16. Other duties as directed.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. Experience working in (preferably leading) a DevOps transition within one or more organisations
2. Ability to steer the implementation and maintenance of a fully automated CI/CD pipelines end-to-end, from code commits to production
3. Experience with application software development, and modern engineering practices in order to architect and collaborate on the development, deployment and monitoring of web applications in Azure (or AWS) within a live production environment
4. Experience with Infrastructure as Code, infrastructure testing strategies and tools such as terraform/ansible
5. Strong ability to drive the development of .NET microservices that integrate with event-driven architecture and databases
6. Show a considerably high level of trust, respect and empathy towards others, and be a highly curious individual on a path of gathering and sharing new information

## **Desirable**

1. Experience with 3D game engines (Unity, Unreal)
2. Experience in managing the reliability, load balancing, monitoring, and logging of cloud-based systems
3. Experience with various deployment strategies including Blue-Green, Canary, Feature Toggle, etc.
4. Experience developing .NET core API’s
5. Experience using tools such as Kubernetes, Docker, CircleCI and Harness
6. Ability to integrate security aspects and considerations during application and platform development
7. Experience with NoSQL databases, e.g., MongoDBExperience with monitoring tools e.g., Prometheus, Grafana, Splunk
8. Experience with tooling for Event Driven Architecture and Microservices e.g., Kafka, RabbitMQ, AKKA.NET
9. Strong scripting skills e.g., Bash/Powershell/Python, etc.
10. Experience working with Confluent
11. A cloud certification such as CKA (Certified Kubernetes Administrator) or CKAD (Certified Kubernetes Application Developer)
12. BS or MS degree in Computer Science, Engineering, or another related area

## **Required Competencies**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other team as well as industry colleagues.
* **Influence and Communication:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious, proposals / ideas.
* **Resource Management/Leadership:** Provides leadership that fosters an environment that encourages new ideas and provides support for the development of emerging skills. Creates trust by displaying consistency and understanding through integrity and patience. Plans, seeks, allocates and monitors resources to achieve outcomes.
* **Judgement and Problem Solving:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
* **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
* **Adaptability:**Is flexible in response to external change or when faced with external constraints. Identified and promotes the opportunities arising as a result of change.

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) for more information.

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* People First
* Further Together
* Making it Real
* Trusted