# Position Details

## Research Projects- CSOF4

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| The following information is for applicants | |
| Advertised Job Title | Operating Systems Engineer |
| Job Reference | 69672 |
| Tenure | Specified Term of 18 months (Full-time) |
| Salary Range | AU$83,687 to AU$94,679 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Eveleigh, NSW |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to the | Senior Research Engineer |
| Client Focus – Internal | 50% |
| Client Focus – External | 50% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Ihor Kuz via email at: ihor.kuz@data61.csiro.au or phone: +61 2 9490 5882 |
| 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. |

### Role Overview

Research Projects staff in CSIRO collaborates 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.

The Operating Systems Engineer will develop and expand operating systems (seL4 and eChronos) and their surrounding infrastructure to bring a software platform with an unprecedented level of trust to the world. The Operating Systems Engineer will collaborate with researchers, external companies, and the open-source community.

### Duties and Key Result Areas:

* Develop, maintain, and test projects and infrastructure on and around the seL4 operating system, including the static Camkes platform, dynamic user-level libraries, virtual machine managers on a variety of ARM, x86 and RISCV hardware.
* Contribute to Data61s growing set of documentation, tutorials and other resources for internal team members and the open-source community as a whole.
* Interact with Data61s collaborators, including open-source, external companies and researchers, via our mailing list and other communication channels.
* Work collaboratively with colleagues as part of an agile and semi-autonomous team of OS engineers to carry out tasks in support of scientific research.
* Communicate effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## **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 teams as well as industry colleagues.
* **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others reactions.
* **Resource Management/Leadership:** Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.
* **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
* **Independence:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **Adaptability:**Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

## **Selection Criteria**

#### Essential

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

1. Relevant Bachelors/Masters’ Degree or equivalent experience in Computer Science, Mathematics, or similar*.*
2. Experience with seL4, developing kernel and user-level code.
3. Programming experience in low-level, unmanaged languages (C, assembler).
4. Programming experience in scripting languages.
5. Experience with current engineering practices including version control, continuous integration, issue tracking and code review.
6. Basic knowledge of operating systems and concepts (virtual memory, process management, etc).
7. Experience working in a collaborative team of software engineers.
8. The ability to understand current research in computer science.
9. Demonstrated ability to tackle complex problems.
10. The ability to work effectively as part of a multi-disciplinary, regionally dispersed research team, and carry out tasks autonomously in support of scientific research.
11. Demonstrated ability & willingness to contribute novel ideas and approaches in support of scientific investigations.

## **Desirable:**

1. The ability to read and program assembler or to learn it quickly.
2. Experience writing or porting device drivers in an operating system environment.
3. Programming experience in functional languages (Rust, Haskell, ML, Erlang).
4. Experience working in an agile team.
5. Familiarity with software verification.

Special Requirements

Appointment to this role may be subject to the following condition:

The successful candidate will be asked to obtain and provide evidence of a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.

## **About Data61:**

Find out more about [Data61](http://www.data61.csiro.au/)