# Position Details

## Research Projects- CSOF5

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| The following information is for applicants |
| Advertised Job Title | Research Software Engineer – [Australian SKA Pathfinder](https://pawsey.org.au/projects/australian-square-kilometre-array-pathfinder-askap/) (ASKAP) |
| Job Reference | 85354 |
| Tenure | Term – 3 yearsFull-time or part-time – minimum 60 hours per fortnight |
| Salary Range | AU$102,724 - AU$111,165 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Kensington (Perth) Western Australia or Marsfield (Sydney) New South Wales |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian Citizens and Permanent Residents, (currently residing in Australia)
* New Zealand Citizens (currently residing in Australia)
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| Position reports to the | Team Leader, Science Data Processing and Archives |
| Client Focus – Internal | 100% |
| Client Focus – External | 0% |
| Number of Direct Reports | 0 |
| Enquire about this job | Eric Bastholm via email Eric.Bastholm@csiro.au or telephone 08 6436 8505 |
| How to apply | Apply online at <https://jobs.csiro.au/> Internal applicants please apply on **Jobs Central** via ‘People Hub’ If you experience difficulties when applying, please email careers.online@csiro.au or call 1300 984 220. |

**Acknowledgement of Country**

### CSIRO acknowledges the Traditional Owners of the land, sea, and waters, in the areas where we live and work 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

Research Software Engineers in CSIRO conduct innovative software development in support of researchers, leading to scientific achievements that are aligned with CSIRO’s strategies. The *Research Software Engineer – ASKAP* will participate in the development of software components that coordinate and support the processing of radio astronomy data within a High-Performance Computing (HPC) environment.

ASKAP, the Australian Square Kilometre Array (SKA) Pathfinder, is CSIRO’s new-technology radio telescope in the remote Murchison region of Western Australia. A unique feature of ASKAP is that a supercomputer and supporting infrastructure forms an integral part of the telescope and the computing resources of the Pawsey Supercomputing Centre are critical to generating ASKAP science results. The entire ASKAP software suite, including: science data processing pipelines, monitoring and control, reporting, data archiving, process coordination, and scheduling; creates a challenging software ecosystem.

### Duties and Key Result Areas:

* Work together with project stakeholders, including ASKAP Scientists, other Software Engineers, and Pawsey Technical staff to determine their needs and priorities.
* Assist in the design, implementation, testing, and maintenance of software components using originality, creativity, and innovation.
* Triage issues appropriately.
* Participate in operational support of ASKAP by contributing to fault analysis of software components.
* Share your knowledge and experience, create software solutions, and nurture innovation by becoming a valued and trusted team member.
* Create software solutions by exploring innovative ideas and approaches, and networking with science and engineering colleagues.
* Communicate openly, effectively, and respectfully with all staff, clients and suppliers, and form quality interpersonal relationships that reflect CSIRO’s values and reputation.
* Be part of a multi-disciplinary, regionally dispersed research team that supports CSIRO’s scientific objectives.
* Follow the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Zero Harm goals.
* Other related tasks as requested.

## **Selection Criteria**

#### Essential

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

1. A relevant Bachelor’s or Master’s degree, or equivalent relevant work experience in Computer Science and Programming.
2. Extensive experience (4-5 years minimum) developing **distributed** software solutions.
3. Demonstrated experience with **Python**, and-or **C++**, and Unix/Linux.
4. Demonstrated experience in **high-level software design and documentation**.

## **Desirable:**

1. Formal **software modelling and design techniques** (e.g., UML, ERM, micro-services, functional programming, design patterns, abstract interfaces, etc)
2. Experience with:
* **Cloud**
* **High performance computing** (HPC) systems and supporting services
* **Messaging** and RPC middleware products and concepts
* **Agile** software development methodologies and practices
* **Continuous Integration** and automated testing
* **Git** and Git workflows
1. Familiarity with **JIRA** and **Confluence**
2. **Experience in astronomy** (or other computation focussed science domain such as bioinformatics, genomics, geophysics), or control systems and their interfaces

## **Required Competencies:**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources 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:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
* **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:** Plans, sets, and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome, and sets realistic goals to reach this target.
* **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.

Special Requirements

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

## **About CSIRO:**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [CSIRO Space and Astronomy](https://www.csiro.au/en/Research/Astronomy).

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