# Position Details

## Technical Services - CSOF5

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| The following information is for applicants | |
| Advertised Job Title | Data Operations Software Developer |
| Job Reference | 98574 |
| Tenure | Indefinite, Full-time |
| Salary Range | AU$114k - AU$123k per annum (pro-rata for part-time) plus up to 15.4% superannuation |
| Location(s) | Perth, Western Australia |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian Citizens, Australian/ New Zealand Permanent Residency |
| Position reports to the | Head of Operations |
| Client Focus – Internal | 50% |
| Client Focus – External | 50% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Lachlan Campbell lachlan.campbell@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).

**Child Safety**

CSIRO is committed to the safety and wellbeing of all children and young people involved in our activities and programs. View our [Child Safe Policy](https://www.csiro.au/en/about/policies/child-safe-policy).

### The Opportunity

### The Square Kilometre Array Observatory (SKAO) is coordinating a global effort to deliver one of the largest science facilities on the planet. The SKAO telescopes will be next-generation instruments that will help to answer key questions in astrophysics, drive technological innovation and support human capital development.

### More than a dozen partner countries and over a thousand scientists and engineers around the world are already on board, making the SKA project an international collaboration like no other, and one of the most ambitious science and engineering endeavours of the 21st century.

### The Australian SKA Regional Centre (AusSRC) is part of a global network dedicated to developing the capabilities necessary to assist SKA science communities. Its primary goal is to maximize the scientific potential of the vast data generated by the telescopes, paving the way for a new era of astronomical discoveries and sophisticated data processing.

### This position is perfect for a software or data engineer who has experience in scientific research environments and is eager to play a vital role in developing a global network of data centers. This network will empower scientists to unlock groundbreaking discoveries from the extensive data generated by the SKAO telescopes.

### Role Overview

### The AusSRC is looking to employ a talented and driven software engineer to join our small, friendly team based in Perth, Western Australia. With the SKA now in construction, the development of the global network of data centres - the SKA Regional Centre Network (SRCNet) - to support the operations of the SKA has entered an exciting phase.

### SRCNet is crucial to the success of the SKA project; since the observatory’s output data products will be too large for astronomers to download and process locally, scientists will rely on the SRCNet to make new scientific discoveries. In addition to efficiently storing and managing the Exabyte-scale archive of data products globally, the SRCNet will provide services for astronomers to discover, visualise and process the SKA telescope data products, promoting the principles of open science and reproducibility of results.

### In order to support our delivery of the SRCNet, we are looking for someone with experience in delivering production-quality software with a particular focus on deployment and operational aspects as required for running services in a cloud ecosystem. This includes a good understanding of programming languages and frameworks commonly used in web service development, as well as the containerisation and orchestration technologies that help operators manage, maintain and further develop these services. Complementing these, a background in scientific research is desirable, but not required.

### The SRCNet development initiative operates on a global scale, involving numerous stakeholders and developers from various locations. Therefore, the ideal candidate must demonstrate exceptional organizational and communication skills, coupled with a strong commitment to collaborating effectively with partner organizations and individuals. This role may also require occasional travel, both domestically and internationally, estimated at around four times a year.

### The AusSRC is dedicated to fostering an inclusive and adaptable working environment. There may be instances when this role necessitates the post holder to collaborate across various time zones. Flexible working hours will be accommodated in consultation with the line manager.

### Duties and Key Result Areas

* Contribute to the design, development, deployment and maintenance of software to run in, or support interoperation between, the SRCNet data centres.
* Collaborate with cross-functional teams to identify and resolve operational issues, ensuring high availability and performance of our systems.
* Communicate work outcomes and demonstrate software functionality regularly.
* Create and maintain documentation related to infrastructure, processes, and workflows.
* Other duties as directed.

## **Selection Criteria**

#### Essential

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

1. Tertiary or graduate qualification in Science, Computing or Engineering, or equivalent experience.
2. Ability to resolve multifaceted and complex problems, develop coherent solutions.
3. Ability to manage workloads and targets in a dynamic and collaborative environment.
4. Ability to build effective working relationships with engineers and scientists from a variety of cultures, to communicate ideas well and to foster a collaborative ethos.
5. Experience with, or a proven commitment to, Agile practices, including the importance of end-user focus and a pragmatic approach to decision making.

## **Desirable**

1. Knowledge of programming languages (such as Python) and source code management tools.
2. Demonstrated experience with OpenStack or similar cloud environments (AWS, Google, Azure).
3. Experience with Internet technologies such as web servers and database servers.
4. Exposure to High Performance Computing environments (e.g. experience with workload schedulers such as Slurm or PBS Pro) or container orchestration environments.
5. Demonstrated success in managing computer systems in a research environment.
6. Experience with automation, testing or provisioning technologies such as Ansible, Puppet, MAAS and Jenkins.
7. Demonstrated success in the design and deployment of new services or platforms for use by researchers or clients.
8. Familiarity or exposure to cybersecurity best practices, AI technologies, and Agile methodologies.

## **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:** 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.