# Position Description

## Technical Services – CSOF4

The following information is for applicants

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| Advertised Job Title**:** | Research Software Engineer (Web & Cloud) – IMT Scientific Computing  Group |
| Job Reference: | 59839 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | Australian Citizens Only |
| Percentage of Client Focus - Internal: | 100% |
| Percentage of Client Focus - External: | 0% |
| Reports to the: | Science Applications Team Manager, IMT Scientific Computing Services |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries: | If after reading the position details above you require more information please contact: **Daniel Collins** via email: daniel.collins@csiro.au |
| Contact Details For Applying: | Call 1300 984 220 or email [careers.online@csiro.au](mailto:careers.online@csiro.au). |
| How to Apply: | Please apply online at [jobs.csiro.au](https://jobs.csiro.au/) and enter the requisition number**.** Internal applicants please apply via ‘Jobs Central’ through the ‘People Hub’ icon |

## Role Overview:

The role of Technical Staff in CSIRO is to provide support for scientific research in a diverse range of laboratory and field situations across a range of different research projects. This support consists of the application of accepted technical practices and the development of new practices. The work is usually carried out as a member of a centralised service.

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) is Australia’s largest scientific research organisation, and one of the largest and most diverse scientific organisations in the world. CSIRO’s staff are focused on delivering science and research outcomes for Australia that provide new ways to improve the quality of life, as well as the economic and social performance of many industry sectors.

The Scientific Computing group within the Information Management & Technology (IMT) function provides end-to-end infrastructure ranging from generic corporate IT systems through to leading edge High Performance Computing (HPC) data processing tools and platforms. The teams manage over 30PB of data at a compounded annual growth rate of ~75%, and a proportionate computational and network fabric including several Top500 supercomputers, a private cloud and a highly versatile and robust corporate hosting platform. Additional services include advanced visualisation, data processing, application support and software delivery. The capability is highly client focussed and operates closely in partnership with all areas of CSIRO research.

The Science Applications team provides research software engineering expertise to the full spectrum of computational science and research carried out within CSIRO. Our expertise spans fields such as data analytics, machine learning, software engineering, computational fluid dynamics, modelling and simulation, high-performance computing, and supercomputing. We work in partnership with researchers and domain specialists, bringing computer science and software engineering expertise to bear on research projects.

In this role you will work on real-world problems in a leading R&D organisation alongside a team of diverse software engineers and technical specialists.

This role focuses on web development for scientific applications. The core competencies include:

* Demonstrated ability to work with autonomy.
* Ability to engage with researchers and scientists at the project level and successfully deliver outcomes.
* Ability to operate with colleagues in other teams in IMT and business units in developing solutions.
* Demonstrated experience developing and supporting scientific web applications written in modern frameworks used by the scientific community such as Shiny, Dash, and Jupyter.
* Demonstrated experience with programming languages such as R, Python, and JS. Experience with other languages such as MATLAB, Java, C, or C++ would also be useful.
* Demonstrated web development experience. Experience with both front-end and back-end technologies is desirable.
* Familiarity with the design and implementation of web APIs. Knowledge and experience with REST and microservice architectures is desirable.
* Familiarity in the use of virtualisation and containerisation technologies and their application in developing portable experimental platforms for researchers and scientists for deployment into differing computing environments: public or hybrid clouds, high performance computing or data-based environments.

**Security Clearance:**

This is a security assessed position. Applicants must be an Australian citizen, with successful candidate either holding or having the ability to obtain a Baseline Australian Government security clearance.

## Duties and Key Result Areas:

The Research Software Engineer (Web and Cloud) will be involved in a range of activities:

* Engage with Scientific Computing clients to understand needs and deliver against them.
* Act as a consultant and knowledge resource for Scientific Computing clients and other IMT teams.
* Provide technical information and guidance around Scientific Computing's service and capabilities.
* Identify and solve client problems proactively, and be responsible for support requests and escalations.
* Be a trusted adviser to clients and decision makers.
* Other duties as directed.

You will also:

* Contribute to knowledge sharing within the team by documenting procedures and be able to liaise effectively with users regarding the delivery of services to meet their needs. Work may be required at other CSIRO sites within Australia.
* Communicate effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively with colleagues within your team, the business unit and across CSIRO, to reach objectives.
* Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.

## CSIRO Competencies:

1. **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.**
2. **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.**
3. **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.**
4. **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
5. **Independence: Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).**
6. **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:

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

1. A tertiary qualification in Science, Engineering, Computer Science, Information Technology or other related field, or equivalent relevant experience.
2. Demonstrated experience in the use of a scientific computing language such as Python, R, Fortran, C, C++, or MATLAB.
3. Demonstrated experience developing and supporting scientific web applications written in modern frameworks used by the scientific community such as Shiny, Dash, or Jupyter.
4. Demonstrated ability to investigate problems by identifying and considering the implications of a range of available alternative solutions.
5. Demonstrated ability to work with independence and self-motivation within a team environment.
6. The ability, willingness and motivation to contribute novel ideas and approaches in support of science.

**Desirable Criteria:**

1. Ability to engage with researchers and scientists, understand their challenges and requirements, and tailor appropriate solutions.
2. Experience with JavaScript, HTML and CSS, and with at least one modern web framework such as Ember, Vue.JS, React, or Angular.
3. Familiarity with the use of virtualisation and containerisation technologies and their applications in the research domain.

**Special requirements:**

To be eligible for this position you must have a current Australian Security Clearance or have the ability to obtain one.

You may be required to work at other CSIRO sites within Australia.

## About CSIRO:

We imagine. We collaborate. We innovate. To find out more visit us [online](http://www.csiro.au/)!

**CSIRO Information Management and Technology (IM&T)** is committed to introducing and maintaining up-to-date, quality information services in support of CSIRO’s strategic objectives. Ongoing business engagement maintains strong connections between IM&T and CSIRO’s research areas so that our services are closely aligned with CSIRO’s strategic objectives, and forms the basis for IM&T’s annual Operational Plans.