# Position Details

## Technical Services- CSOF3/4

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| The following information is for applicants | |
| Advertised Job Title | Software Engineer/Data Analyst – Seagoing (2 positions) |
| Job Reference | 71144 |
| Tenure | Indefinite  Full-time |
| Salary Range | CSOF3: AU$63,594 to AU$80,937 pa (pro-rata for part-time)  or  CSOF4: AU$83,687 to AU$94,679 pa (pro-rata for part-time)  + up to 15.4% superannuation |
| Location(s) | Hobart, TAS |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian/New Zealand Citizens and Australian Permanent Residents Only |
| Position reports to the | Team Leader, Data Acquisition and Processing or  Team Leader, Information and Data Centre |
| Client Focus – Internal | 90% |
| Client Focus – External | 10% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Hugh Barker: hugh.barker@csiro.au or phone: 0437 856 651  Or  Pamela Brodie via email: pamela.brodie@csiro.au or phone: 03 6232 5556 |
| 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

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 Software Engineers/Data Analysts will sit within the Scientific Data Systems (SDS) Group, which is part of the Engineering and Technology Program within CSIRO National Collections and Marine Infrastructure (NCMI). The roles will provide support to the Marine National Facility (MNF) research vessel in the areas of software development, data processing, data management and Information and Communications Technology (ICT) network administration.

The MNF research vessel has a sophisticated ICT network used to support the operation of the vessel and to collect data from the vessel’s array of scientific instrumentation. **A requirement of the role is to provide up to 85 days per year of seagoing support on voyages that are typically 3 to 8 weeks in duration**. Whilst at sea, the Software Engineers/Data Analysts will be responsible for the running of various data acquisition systems; monitoring the quality of the collected data; administration of the vessel’s ICT network; providing general computing support to voyage participants; and liaising with scientists to assist them in achieving the scientific objectives of the voyage.

The positions will be based in the CSIRO Laboratories in Hobart. Onshore, role requirements include maintaining existing software and web interfaces, database services and geospatial tools as well as developing new software applications and tools associated with the acquisition, processing, visualisation and management of MNF vessel data. The Software Engineers/Data Analysts will also be required to complete data processing tasks which result in the delivery of quality controlled MNF data products through the CSIRO Information & Data Centre (IDC).

On-the-job training and mentoring will be provided in CSIRO-specific systems and for the seagoing aspect of the role.

### Duties and Key Result Areas:

* Develop and maintain software systems in support of the acquisition, processing, visualisation, serving and management of a wide range of scientific and geospatial data.
* Undertake the role of computing support person on MNF research voyages - operate data acquisition systems, maintain data quality, provide general ICT support to voyage participants and network administration of the information and communications technology on board the vessel.
* In conjunction with other electronic and computing support staff, diagnose and rectify hardware, firmware and software problems with scientific data acquisition and instrumentation systems, and with the ship’s ICT network infrastructure.
* Liaise with scientists and assist with the processing, quality control and visualisation of data acquired by the MNF research vessel.
* Liaise with clients to determine their needs and take personal responsibility for their satisfaction, by correcting problems promptly and in a constructive manner.
* Liaise with key stakeholders including data providers, server providers, standards bodies and other experts concerning aspects of data collection, processing, metadata and archiving.
* 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.
* Work collaboratively as part of a multi-disciplinary, often regionally dispersed research team, and business unit to carry out tasks in support of CSIRO scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Making Safety Personal goals.
* Other duties as directed.

**For appointment at the higher salary level (CSOF4), duties will also include:**

Under limited direction:

* Proactively identify and take ownership of opportunities for improvements in systems and procedures; analyse underlying issues of complex and ill-defined problems; develop solutions and manage them through to delivery of a positive outcome.
* Collaborate effectively with other teams and industry colleagues to achieve objectives.

## **Required Competencies:**

* **Teamwork and Collaboration:** 
  + **CSOF3: Proactively seeks and considers the ideas and opinions of others from within and outside the team to help form decisions, plans or actions.**
  + **CSOF4: 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:**
* **CSOF3: Puts forward ideas by presenting factual information supported by data, definitions, examples, illustrations or other aids which will assist in conveying meaning.**
* **CSOF4: 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:**
* **CSOF3: Provides instruction and assists other staff to complete allocated tasks and activities.**
* **CSOF4: 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:**
* **CSOF3:** Identifies and considers the implications of a range of available alternatives in order to select the most appropriate response to problems of a familiar or recurring nature.
* **CSOF4:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
* **Independence (CSOF3 and CSOF4): Recognises and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).**
* **Adaptability:**
* **CSOF3:** Willingness to change ideas or perceptions based on new information, contrary evidence or other people's points of view. Prepared to try out different approaches.
* **CSOF4:** 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. A tertiary qualification in Information Technology and/or equivalent relevant experience.
2. Demonstrated computing skills as follows:
   1. Ability to develop software in modern languages (e.g. Python) and experience with frameworks, libraries and languages relevant to the development of data systems and web-based applications.
   2. Windows/Linux system administration.
   3. An understanding of software engineering methodologies and version control systems.
3. Excellent interpersonal, oral and written communications skills, including demonstrated ability to clearly document software, data flows and to produce manuals and/or reports.
4. Demonstrated ability to work collaboratively and interact effectively, sometimes from remote locations, as part of a highly competent and committed team.
5. A strong customer-centric support ethic with the ability to provide a high level of technical support at sea for the duration of voyages (up to 85 days per year, typically 3 to 8 weeks in duration).

**For an appointment at the higher (CSOF4) salary level, as well as satisfying the Essential Criteria listed above, you must also have:**

1. Demonstrated ability to develop and meet goals, working with clients under limited direction to mutually agreed outcomes and specific deadlines.
2. Demonstrated ability to proactively identify and take ownership of opportunities for improvements in systems and procedures; analyse underlying issues of complex and ill-defined problems; collaborate with stakeholders outside of the team; develop solutions and manage them through to delivery of a positive outcome under limited direction.

## **Desirable:**

1. Demonstrated computing skills and domain knowledge as follows:
   1. An understanding of data flow from sensor to data product.
   2. Experience with Data Science, particularly with Oceanographic, Atmospheric and/or Marine Science data sets
   3. Experience programming in Python and Matlab.
   4. Portfolio of software programming examples that are the sole work of the candidate.
   5. Database development experience.
2. Demonstrated experience with administration of enterprise level network infrastructure including firewalls; switches; virtual servers; data backup and storage systems.
3. Demonstrated understanding of open source geospatial catalogues, spatial data publication and OGC standards
4. Experience providing customer facing support.

Special Requirements

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.
* Must be willing and able to work at sea and to travel extensively in order to provide operational support in domestic or foreign ports (up to 85 days per year of seagoing support on voyages that are typically 3 to 8 weeks in duration).
* Must obtain an MNF remote medical clearance and a Marine Security Identification Card.

## **About CSIRO:**

We solve the greatest challenges through innovative science and technology. To find out more visit us [online](http://www.csiro.au/)!

CSIRO is a values-based organisation. We expect our employees to demonstrate behaviours aligned to our values of:

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