# Position Description

## Technical Services – CSOF4

The following information is for applicants

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| Advertised Job Title**:** | Software Engineer/Data Analyst – Seagoing (2 positions) |
| Job Reference: | 59129 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | Australian Citizens Only  Australian/New Zealand Citizens and Australian Permanent Residents Only   * All Candidates |
| Percentage of Client Focus - Internal: | 90% |
| Percentage of Client Focus - External: | 10% |
| Reports to the: | Team Leader, Data Acquisition and Processing |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries: | Mr Ian Hawkesvia email: ian.hawkes@csiro.au or phone: 03 6232 5047  Mr Hugh Barker via email: hugh.barker@csiro.au or phone: 03 6232 5074 |
| 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 Software Engineers/Data Analysts will sit within the Scientific Data Systems (SDS) Group, which is part of the Engineering and Technology Program in CSIRO Oceans and Atmosphere (O&A). The roles will provide support to the Marine National Facility (MNF) research vessel in the areas of programming, 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 developing new software applications and tools associated with the acquisition, processing, visualisation and management of MNF vessel data. The Software Engineer/Data Analysts will also be required to complete data processing tasks which result in the delivery of quality controlled MNF data products through the O&A 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 and management of marine and atmospheric 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 equipment and software manufacturers, as required, concerning equipment purchasing and upgrades.

* 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.
* 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 plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## 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 and/or equivalent work experience in Information Technology or a related field.
2. Demonstrated computing skills as follows:
   1. Ability to program in modern object-oriented languages (e.g. Python, Java; C++ etc.) and experience with frameworks, libraries and languages relevant to the development of data systems and web-based applications.
   2. Windows/Linux network administration skills.
   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, 3 to 8 weeks duration).
6. Demonstrated ability to develop and meet goals, working with clients under limited direction to mutually agreed outcomes and specific deadlines.

## Desirable Criteria:

1. Demonstrated computing skills and domain knowledge as follows:
   1. An understanding of data flow from sensor to data product.
   2. Experience with Oceanographic and Marine Science data sets\ability to program in Python and Matlab.
   3. Portfolio of software programming examples that are the sole work of the candidate.
2. Demonstrated experience with administration of enterprise level network infrastructure including firewalls; switches; virtual servers; data backup and storage systems.
3. Experience providing customer facing support.

## Special Requirements:

The appointee to this role must have the ability and willingness to:

1. 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).
2. Obtain an ASPEN Certificate of Medical Fitness; a Marine Security Identification Card, and a Certificate of Sea Safety Training issued by the Australian Maritime Safety Authority in accordance with Marine Orders Part 3.

## About CSIRO:

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Find out more about CSIRO [Oceans and Atmosphere](https://www.csiro.au/en/Research/OandA)