# Position Description

*Technical Solutions Workflow Engineer*

## Technical Services – CSOF4

The following information is for applicants

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| Advertised Job Title**:** | Technical Solutions Workflow Engineer |
| Job Reference: | 60956 |
| 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: | Technical Solutions Manager |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries: | Tim Ho contact via email: tim.ho@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 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 Technical Solutions team within the Scientific Computing group is responsible for the delivery of a range of Scientific Computing services to support CSIRO’s strategic and operational objectives, including consultation, business analysis, scientific workflows, solutions design and training. In addition to the internal research cloud, the team also takes responsibility for CSIRO’s HPC platforms, programming and runtime environments, software, technical support and services for a large and diverse user base.

The Scientific Computing group is looking for a Scientific Workflow Engineer to support CSIRO’s computational and data intensive workflows. This will be carried out as part of the Technical Solutions team within the Scientific Computing group. You will provide scientific workflow support and services in diverse computing environments, and support the researchers in problem-solving to enable CSIRO science outcomes. You will collaborate closely with researchers to make the best use of CSIRO’s computing platforms and infrastructure. As a hands-on professional you will have an in-depth understanding of our computing services and capabilities as well as working experience in HPC and cloud computing. You will engage with research teams to understand their computing requirements and enhance their productivity by designing, developing and managing fit-for-purpose scientific workflows.

This is an opportunity to work in a professional and technically challenging environment, supporting a diverse range of applications, to further the use of computation in science discovery.

Work may be required at other CSIRO sites within Australia.

## Duties and Key Result Areas:

* Liaise with clients to determine their scientific workflow requirements
* Implement and develop scientific workflows for a broad range of research applications
* Assist clients in evaluating, optimising and transitioning existing scientific workflows to CSIRO’s scientific computing platforms, including HPC and cloud systems
* Manage CSIRO’s Galaxy bioinformatics system and provide user support, including Galaxy tools development and integration
* Undertake a wide variety of tasks that have a high degree of technical difficulty, documenting procedures and training clients in systems and processes
* Utilise management expertise including the ability to plan, organise and monitor resources for CSIRO’s scientific workflow projects
* Communicate openly, effectively and respectfully with all staff, clients and vendors 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. Relevant trade certificate/diploma/degree or relevant work experience in scientific computing
2. Experience in providing services to researchers, including engagement with them to determine workflow requirements and provide advice as required
3. Experience in the design and implementation of scientific workflows that address a range of computation, data processing and visualisation needs
4. Demonstrated background in the porting and deployment of scientific application workflows on HPC and/or cloud systems
5. Previous experience in Linux system administration
6. Experience in the development of user documentation, technical guides and training materials
7. Strong problem solving and analytical skills
8. Demonstrated ability to work with independence and self-motivation within a team environment

## Desirable Criteria:

1. Experience in scientific workflow tools, including the Galaxy bioinformatics system
2. Experience in developing workflow components in programming languages such as C++ and Python
3. Experience in configuration management tools such as Puppet and Ansible

## Special Requirements:

To be eligible for this position you need to be an Australian citizen as the successful candidate must hold or have the ability to obtain a Negative Vetting Level 1 (SECRET) Australian Government security clearance.

## About CSIRO:

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

Find out more about the CSIRO [Information & Technology](https://my.csiro.au/orginfo/structure/support/imt)