Australian National University

Position Description

College/Division:	Deputy Vice-Chancellor (Research and Innovation)
Faculty/School/Centre:	
Department/Unit:	National Computational Infrastructure (NCI)
Position Title:	HPC and Data Software Specialist
Classification:	ANU Officer Grade ANU08 (IT)
Position No:	
Responsible to:	Team Lead, HPC Software and Data Modernisation
Number of positions that report to this role:	
Delegation(s) Assigned:	

PURPOSE STATEMENT:

The position of in HPC and Data Software Specialist:

- Provides high quality software with the focus on codes used in priority scientific domains with major activities at NCI, such as, Climate and Weather, Earth Observation, Geosciences, National Water Management, Astronomy and Genomics;
- Provides HPC and Data Software expertise, guidance and leadership with technical and user documentation, high quality training tutorial and workshop materials and presentations, reporting, and other content to support the user community in the development of advanced software and research data, including standards, software, technologies and operation of software infrastructure to maintain high scientific quality and high performance data access and analysis at NCI;
- Undertakes leadership roles which may include one or more of project supervision, stakeholder engagement and coordination.

KEY ACCOUNTABILITY AREAS:

Position Dimension & Relationships:

The position of HPC and Data Software Specialist will be located in a team within the portfolio of the Deputy Director (HPC and Data Innovation) and reports to the Team Lead, HPC Software and Data Modernisation. In undertaking their work, the incumbent will work/liaise with external researchers and software developers, and other NCI staff members.

Role Statement:

Under the broad direction of the Team Lead, HPC Software and Data Modernisation, the incumbent will:

- Develop and maintain high quality software, tools, packages, and Jupyter notebooks, for use by research communities at NCI. This involves software and package management practices, including testing and version control.
- Evaluate and improve the research use of NCI HPC and Data capabilities, such as those used in virtual laboratories, data collections, data analysis environments, information and data services and supercomputers. This includes creating, adopting, and adapting external codes and improving their application for NCI's capabilities. These will be used at NCI to directly assist users, as well as create HPC and data benchmarks, exemplar use cases, and reference materials for training and skills development.
- Play a lead role in contributing to user communication for supported research software and techniques, including web, other electronic forums, workshops and training, direct engagement with staff in stakeholder organisations, working group leadership and project management.
- Maintain currency with advances in relevant research software and data technology, tools and techniques, through literature, conferences, international working groups, and other means.
- Comply with all ANU policies and procedures, and in particular those relating to work health and safety and equal opportunity.
- Other duties, appropriate to this classification, as directed.

SELECTION CRITERIA:

1. Postgraduate degree and demonstrated research experience, or a science degree with extensive relevant experience in scientific data or an equivalent combination of relevant education and training.
2. Well-developed skills in scientific code improvements and data analysis from at least one of major modelling or observation data source (in particular climate and weather, environmental, geophysics, and genomics).
3. Demonstrated capability in HPC and data analysis within Linux environments:
    - Demonstrated experience in: modern software development environments and libraries (e.g., Jupyter notebooks, Dask, xarray, Fortran, C); software applications for viewing and analyzing data; scripting in Linux environment; and using and managing GIT code repository systems.
    - A working knowledge of international scientific standards, data tools and utilities and how they can be applied for HPC and data analysis.
    - Experience in scientific self-describing data formats (e.g., NetCDF4/CF, HDF5, zarr) commonly used in computational and data-analysis environments.
    - Experience in programming for information and scientific data services.
4. Demonstrated experience in supporting high quality services to users, including conducting data quality control, providing consultation and advice on data assurance, analysing problems and resolving problems related to scientific requirements, monitoring the status of services, and proactively seeking service improvements to meet emerging areas of need.
5. Highly developed oral and written communication skills, with demonstrated capacity to develop and modify training materials, creating and maintaining a web presence, presenting high quality workshops and tutorials in training exercises, and other reporting functions.
6. Demonstrated capacity to work as a member of a team to achieve high quality business outcomes.
7. A demonstrated high level understanding of equal opportunity principles and a commitment to the application of EO policies in a university context.

The ANU conducts background checks on potential employees, and employment in this position is conditional on satisfactory results in accordance with the Background Checking Procedure which sets out the types of checks required by each type of position.

Supervisor/Delegate Signature:		Date:	
Printed Name:		Uni ID:	

References:

General Staff Classification Descriptors

Academic Minimum Standards

Australian National University

Pre-Employment Work Environment Report

Position Details

College/Div/Centre	National Computational Infrastructure	Dept/School/Section	
Position Title	HPC and Data Software Specialist	Classification	ANU 8 (IT)
Position No.		Reference No.	

In accordance with the Work Health and Safety Act 2011 (Cth) the University has a primary duty of care, so far as reasonably practicable, to ensure the health and safety of all staff while they are at work in the University.

- This form must be completed by the supervisor of the advertised position and appended to the back of the Position Description.
- This form is used to advise potential applicants of work environment and health and safety hazards prior to application.
- Once an applicant has been selected for the position they must familiarise themselves with the University WHS Management System via Handbook guidance https://services.anu.edu.au/human-resources/health-safety/whs-management-system-handbook
- The hazards identified below are of generic nature in relation to the position. It is not correlated directly to training required for the specific staff to be engaged. Identification of individual WHS training needs must be in accordance with WHS Local Training Plan and through the WHS induction programs and Performance Development Review Process.
- 'Regular' hazards identified below must be listed as 'Essential' in the Selection Criteria - see ' Employment Medical Procedures' at http://info.anu.edu.au/Policies/_DHR/Procedures/Employment_Medical_Procedures.asp

Potential Hazards

- Please indicate whether the duties associated with appointment will result in exposure to any of the following potential hazards, either as a regular or occasional part of the duties.

TASK	regular	occasional	TASK	regular	occasional
key boarding	☒	☐	laboratory work	☐	☐
lifting, manual handling	☐	☐	work at heights	☐	☐
repetitive manual tasks	☐	☐	work in confined spaces	☐	☐
Organizing events	☐	☐	noise / vibration	☐	☐
fieldwork & travel	☐	☐	electricity	☐	☐
driving a vehicle	☐	☐			
NON-IONIZING RADIATION			IONIZING RADIATION		
solar	☐	☐	gamma, x-rays	☐	☐
ultraviolet	☐	☐	beta particles	☐	☐
infra red	☐	☐	nuclear particles	☐	☐
laser	☐	☐			
radio frequency	☐	☐			
CHEMICALS			BIOLOGICAL MATERIALS		
hazardous substances	☐	☐	microbiological materials	☐	☐
allergens	☐	☐	potential biological allergens	☐	☐
cytotoxics	☐	☐	laboratory animals or insects	☐	☐
mutagens/teratogens/ carcinogens	☐	☐	clinical specimens, including blood	☐	☐
pesticides / herbicides	☐	☐	genetically-manipulated specimens	☐	☐
			immunisations	☐	☐

OTHER POTENTIAL HAZARDS (please specify):

Supervisor/Delegate Name:		Date:	