



Research Services Office

High Performance Computing Resource Allocation Guidelines: NCI Partner Share

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SECTION 1 – Introduction/Background

- (1) The University of Wollongong offers Partner Share access to Australia’s supercomputer, Gadi, as part of the National Computational Infrastructure (NCI) Collaboration Agreement. The Research Services Office (RSO) manages the Partner Share on behalf of the High Performance Computing (HPC) Steering Committee.
- (2) UOW’s NCI Partner Share resources are in high demand, and a well-managed allocation process helps to maximise our utilisation of this investment. UOW aims to achieve 100% usage each quarter.
- (3) More details can be found here: <https://www.uow.edu.au/research-and-innovation/researcher-support/computing-data-analytics-reporting/research-computing/>. Specific dates and other details can be found within the Knowledge Base Article (KBA) available at: https://uowedu.service-now.com/imts?id=kb_article_view&sysparm_article=KB0010725. This KBA is regularly updated.

SECTION 2 – Scope / Purpose

- (4) These Guidelines have been developed to ensure a fair and equitable use of the NCI Gadi supercomputing resources.
- (5) These Guidelines will inform researchers and research students about the process to request access to these resources, and the methods used to ensure equitable allocation.
- (6) These Guidelines also refer to how research data management practices should be followed and will support the Research Data Management Guidelines.

SECTION 3 – Key Dates

(7) The following schedule outlines the UOW partner share important dates as well as the approximate deadlines for the NCMAS scheme.

Activity	Date
UOW partner share holiday allocation (30KSU are allocated for all projects)	1 January – approx. 15 January
UOW partner share Quarter 1 requests due	Approx 15 January
UOW partner share mid-quarter 1 review requests due	Approx 15 February
UOW partner share Quarter 2 requests due	Approx 29 March
UOW partner share mid-quarter 2 review requests due	Approx 15 May
UOW partner share Quarter 3 requests due	Approx 29 June
UOW partner share mid-quarter 3 review requests due	Approx 15 August
<i>NCMAS applications open</i>	<i>August (date set each year by June)</i>
UOW partner share Quarter 4 requests due	Approx 29 September
<i>NCMAS application information session @UOW</i>	<i>September (date set each year by June)</i>
<i>NCMAS application due</i>	<i>Beginning of October (date set each year by June)</i>
UOW partner share mid-quarter 4 review requests due	Approx 15 November
UOW HPC Annual Confirmation Survey due	Approx 1 November
<i>NCMAS outcomes announced</i>	<i>Mid December (date set each year by June)</i>

SECTION 4 – UOW Partner Share Allocation Process

- (8) A survey webform is issued to the Lead Chief Investigator (CI) on each active NCI project, approximately 2 weeks before the beginning of each quarter. Lead CIs enter the requested amount of computing resources and storage for the upcoming quarter. When the survey is issued, a reminder email is posted to the NCI HPC Users mailing list. All users must ensure they are a registered member of the mailing list.
- (9) The following generally applies:
- a. Smaller requests (i.e. less than 300KSU) are usually approved.
 - b. Larger requests (i.e. between 300KSU and 700KSU) are often capped at a level around 600KSU. This capping occurs depending on the number of projects requesting resources and the amount being requested.
- (10) At the mid-quarter point, the RSO reviews the usage and issues a mid-quarter review survey. Lead CIs can adjust their allocation for the quarter, such that their usage will approximate 100%. The adjustment can therefore be higher or lower.
- (11) It is important to note that the RSO will automatically reduce allocations for any projects where the Lead CI did not respond to the mid-quarter survey and the usage is less than 30%. The adjustment will generally lower the allocation by 50%.

SECTION 5 – Eligibility of Researchers

POSITION / AFFILIATION TO UOW

- (12) Lead CIs must be a paid staff member of UOW, employed at a minimum 0.4 FTE upon NCI Gadi project registration.
- (13) Lead CIs must inform the RSO when their employment contract changes (e.g. if they move to an honorary fellowship, reduced FTE or casual position). Researchers must also inform the NCI as per the Terms and Conditions noted above on page 1.
- (14) When the Lead CI no longer meets the above definition of a paid staff member of UOW:
 - a. If the Lead CI's primary affiliation is moving to a different institution:
 - i. The Lead CI can apply for computing resources in the subsequent quarter only e.g. if their new position starts in February, they can apply for UOW computing resources in Quarter 2 only (beginning 1 April). Note the NCMAS application requirement from Section 6 must also be met.
 - ii. The Lead CI must assign another appropriate employed staff member to their Gadi project in the role of "Lead CI".
 - b. If the Lead CI's primary affiliation will remain with UOW (e.g. the Lead CI is retiring or no longer in a research-related position):
 - i. The Lead CI can apply for computing resources for subsequent quarters if the NCMAS application requirement from Section 6 is met.
 - ii. The Lead CI must assign another appropriate employed staff member to their Gadi project in the role of "Researcher".
 - iii. The Lead CI must receive email approval from the Associate Dean (Research) in their faculty. In general, this would be accompanied by an explanation of why the computing resources are required (e.g. UOW HDR student supervision is ongoing).
- (15) Researchers not meeting the above criteria can request an exception by emailing hpc_admin@uow.edu.au. These requests will be taken to the next Steering Committee meeting for approval – generally the Committee meets once a quarter.

SECTION 6 – Eligibility for Large Computing Resource Requests (>250 KSU per quarter)

- (16) For larger requests (>250,000 SU units per quarter), the [National Computational Merit Allocation Scheme \(NCMAS\)](#) is more appropriate (see Section 5 below for further information on large requests).

REQUIREMENT TO APPLY TO NCMAS

- (17) Lead CIs must have submitted an NCMAS application (regardless of whether it was successful or not) during the previous year (i.e. for requests starting in Quarter 1 of 2024, Lead CIs must have applied to NCMAS in the 2023 round).

- (18) Confirmation of the application must be attached to the UOW HPC Annual Confirmation REDCap survey issued approximately 1 November each year.
- (19) If a Lead CI has not applied for NCMAS, the project will be capped at 250KSU starting at Quarter 1 of the subsequent year, depending on other project requests (i.e. the most that the project can receive will be 250KSU per quarter).
- (20) The NCMAS Frequently Asked Questions (FAQs) can be found here: <https://ncmas.nci.org.au> - see FAQs.
- (21) Early Career Researchers (ECRs) and other researchers without regular university appointments may apply for grants within special categories noted here: <https://ncmas.nci.org.au> - see eligibility.

NEW PROJECTS

- (22) If the project has been created since the previous NCMAS round, requests will be capped at 100KSU for the first quarter, but up to 250KSU may be requested for subsequent quarters until the next NCMAS round opens.

USAGE

- (23) All projects requesting over 250KSU* per quarter must show above 95% usage of their requested allocation for the previous quarter.
- (24) If research personnel or timelines change during any quarter, email hpc_admin@uow.edu.au for advice.
- (25) *This value (1,000,000 SU over one year) may be subject to change in future years, depending on the UOW NCI contract agreement.

SECTION 7 - Storage

- (26) All requests for storage on the gdata on Gadi must be accompanied by a Research Data Management Plan (RDMP) in ReDBox. From 2024, this includes current projects with storage.
- (27) Proof of the completed RDMP should be attached to the UOW HPC Annual Confirmation survey in REDCap issued approximately 1 November each year. This survey has a space to add the ReDBox number. If the RDMP was not completed in ReDBox, attach the RDMP as a Word document.
- (28) All projects will be allocated up to 3 TB when the project is created. Note the storage required must be specifically requested within the NCI project registration application.
- (29) To request more storage, the Lead CI must enter the details into the UOW survey webform that is issued quarterly.
 - a. If the request for storage is between 3 and 15TB:
 - i. The Chair of the HPC Steering Committee will generally approve this amount of storage for a specific amount of time; i.e. for a first request, this will usually be 12 months. After 12 months, the RSO team may ask to review the RDMP with the Lead CI.

- b. If the request for storage is greater than 15TB:
 - i. This amount of storage cannot be guaranteed. It may be granted for a specific amount of time, if approved by the HPC Steering Committee and resources allow.
 - ii. The storage requested will be tabled for approval by the Steering Committee at the next scheduled meeting. Storage may be granted for 6 months or more and will be reviewed by Steering Committee once the agreement has expired.
 - iii. Note the RDMP should be up to date as it will also be reviewed by Steering Committee.
 - iv. Project co-investment can guarantee that the storage is made available for the length of the project. Please contact the RSO to obtain the latest pricing for storage on Gadi.

(30) Each year a review of the RDMP is recommended. If anything has changed, make the changes in ReDBox and make note of the new version in the UOW HPC Annual Confirmation survey in REDCap.

SECTION 8 - Other

- (31) The Lead CI must acknowledge the UOW partner share in any publications: *“This research/project was undertaken with the assistance of resources and services from the University of Wollongong (UOW) partner share of the National Computational Infrastructure (NCI), which is supported by the Australian Government.”*
- (32) The Lead CI user identity on Gadi must not be in a “suspended” state when requesting or using computing resources for a project, even if most of the work is carried out by HDR students who are in an “active” state. The Lead CI must always keep their user identity active for the project to continue to use Gadi computing resources.
- (33) The Lead CI can only have one NCI project that is actively requesting UOW partner share resources at a time. If the Lead CI has more than one grant or other type of project using Gadi, they must request resources to cover both their individual needs and their students' needs and allocate it appropriately.

SECTION 9 – Roles and Responsibilities

- (34) In addition to the responsibilities detailed throughout these Guidelines, researchers and research students must act in accordance with the roles and responsibilities specified in the Research Data Management Policy and Research Data Management Guidelines, and Terms and Conditions of access noted on the NCI website: <https://nci.org.au/users/nci-terms-and-conditions-access>.

SECTION 10 – Definitions

Word/Term	Definition (with examples if required)
Gadi	NCI’s new supercomputer in 2019, Gadi is the most powerful in the Southern Hemisphere. It

	provides increased performance and capacity to the Australian research community.
High-Performance Computing (HPC)	The use of parallel processing for running advanced scientific and research applications on large computing systems.
HPC Steering Committee	The UOW High Performance Computing (HPC) Steering Committee addresses key strategic issues surrounding the governance, support and utilisation of the University's High Performance Computing resources. The Committee currently meets on a quarterly basis and is facilitated by the Research Services Office.
Kilo Service Units (KSU)	Units of kilo-service-units; 1 kSU = 1,000 service units (SU).
Knowledgebase Article (KBA)	Content available through UOW's ServiceNow platform.
Lead Chief Investigator (CI)	Owner of project on the Gadi supercomputer. Controls who can be added to the project as a CI or Researcher.
National Computational Merit Allocation Scheme (NCMAS)	The National Computational Merit Allocation Scheme, a merit-based scheme providing researchers from Australian research organisations with access to Australia's major national computing facilities.
National Computational Infrastructure (NCI)	The National Computational Infrastructure (NCI) is Australia's one of two Tier-1 high-performance data, storage and computing organisations, providing expert services to benefit all domains of science, government and industry.
ReDBox	ReDBox (Research Data Box) is UOW's data management tool. It captures the metadata for your research projects as a Research Data Management Plan (RDMP). Redbox also allows you to request data storage for your project(s) in one of UOW's recommended storage options that aligns with the UOW Data Management Policy and Guidelines.
Research Data Management (RDM)	All the processes and actions required to manage data throughout the research data lifecycle from project inception to permanent disposal or archiving. This includes generation, collection, access, use, analysis, disclosure, storage, retention, disposal, sharing and re-use of data.
Research Data Management Plan (RDMP)	A document that outlines how and when the research data for a specific project will be collected, organised, stored, backed-up, preserved, shared, archived and disposed. Data management plans can be seen as 'living documents' and should be reviewed throughout the duration of the research project and updated as required.
Research Information Technology and Systems (RITAS)	The Research Information Technology and Systems (RITAS) Committee is responsible for the development and execution of strategy in support of the URC and the wider UOW community. It reports to the University Research Committee.

Service Units (SU)	A service unit (SU) is defined to be a measure of high-performance computing resources for the purposes of entitlement and usage accounting. The primary definition of a service unit is in terms of compute resource accounting, i.e. cpu-hours on NCI's peak compute system, however SU equivalences are also defined high-performance storage and cloud resources accounting purposes.
Suspended state	NCI suspends users if their re-certification is overdue. Once the re-certification period has lapsed, the accounts enter the 'suspension' state and all project memberships for that user are suspended as well. If the re-certification is not completed after a certain time, their accounts enter a 'deactivated' state.
Terabytes	Byte – One byte is a typical unit of digital information. It is made up of 8 bits of data, each bit representing a single binary number. One TeraByte is one trillion bytes.
UOW Partner Share	The resources allocated by NCI for the use of Wollongong staff and students. These resources are paid for by the University in a contract that typically runs for 3 years.

AUTHOR	Ann Hollifield, Manager Research Systems, Research Services Office
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