

## **Current NERC Policy on Access to High Performance Computing (HPC) August 2021**

### **ARCHER2 and Monsoon2**

#### **Monsoon2, the Joint NERC/Met Office service**

1. Monsoon2 represents 8.4% of the Met Office Cray XC40. NERC research grant applicants/JWCRP project PIs wishing to use Monsoon2 should follow 7-12 below and, following receipt of funding, refer to the [Monsoon2 application procedure](#).  
You do not need to provide any costs (£) or units of use. Note also 32-33 below.

#### **ARCHER2, the National Service**

2. NERC scientists currently have access to the research council's national computing facility, [ARCHER2](#), a CRAY machine, housed at Edinburgh, together with a support service. The service is managed on behalf of NERC by EPSRC. NERC is currently allocated just over 20% of the total user capacity of ARCHER2, an annual allocation of **9,350,475 Compute Units (CU)**.
3. Supercomputing is an expensive and highly sought after commodity. NERC community access is overseen by the NERC HPC Steering Committee (SC) whose role is to perform a traceable, auditable and evidence-based allocation of NERC's share.

#### **Management of Access**

4. NERC ARCHER2 users are allocated to one of three HPC consortia, each led by a member of the academic community:
  - Oceanography & Shelf Seas (NOC-s)
  - Atmospheric & Polar (NCAS)
  - Mineral & Geophysics (UCL)

[HPC contact details](#)

5. Consortia leaders are responsible, on an annual basis, for managing allocations awarded to each applicant by the HPC Steering Committee.

## **How to Apply**

### Strategic Research, Discovery Science, Studentships, Fellowships, Cross-Council Projects

When applying for NERC research grants which need HPC:

6. Prior to submission of the NERC research grant proposal (Je-S form) applicants must contact the relevant consortia leader (see above) to discuss their requirement, should funding be approved.
7. Applicants must state on the Je-S form that access to Research Council Facilities will be required.
8. This option is situated within the section 'Summary of Resources Required for Project' where there is an option to select 'Add New Research Facility'. Once selected, choose ARCHER2, Monsoon2, JASMIN as applicable, from the drop down list. An option to describe 'Proposed Usage' will appear. Please state in the free text box at this point if the HPC form is submitted (>500 kCU in any one year). See 12 below.
9. An estimate of the total request in Compute Units (CUs) is required for ARCHER2 only.
10. Units of use are not required for Monsoon2.
11. Costs (£) or notional costs are NOT required for use of any of the above facilities. Costs are paid centrally by NERC and the resource is provided free at the point of use for NERC funded grants.
12. If your request exceeds 5% of NERC's total allocation, or 500 kCU, in any one year, you should submit the [NERC HPC application form](#) at the same time as your NERC research grant/Je-S application form, providing very strong justification for the request.  
For joint/split awards, the limit of 500 kCU applies to the total for the whole project, in any one year. Please ensure that this HPC form is also sent to [hpc@nerc.ukri.org](mailto:hpc@nerc.ukri.org) for forwarding to the HPC Steering Committee for comment.
13. If applicants tick the box which says "Research Council Facilities are not relevant to this application" the proposal will be submitted to NERC with the following statement: "Research Council Facilities are not relevant to this application". In this case, time on ARCHER2 or Monsoon2 or JASMIN cannot be guaranteed.
14. A brief justification for use of HPC should be included within the 'Justification of Resources' section of the research grant application (Je-S form).

15. It is not necessary to submit a separate HPC application form (Facility Pro forma = HPC New Form) together with your Je-S form, unless your request for any one year exceeds 500 kCU (see 12 above).

**Following notification of receipt of an award:**

16. Please submit a completed [HPC NEW form](#) to [hpc@nerc.ukri.org](mailto:hpc@nerc.ukri.org) Please help us by including the NERC grant reference number. The form will be presented at the next HPC SC meeting for approval of the CUs/kCUs requested in the first year of the grant, and an allocation made for year one. See 20-24 below.

National Capability

17. National Capability requests in excess of 500 kCU, which have not yet been through a formal NERC review process, are now subject to a review by the appropriate body, before being considered by the committee. The committee will not engage in the peer review of these applications, but will schedule the resource needs in context of the wider NERC HPC user-demand (a capacity-planning role).

All Applicants:

18. Please also refer to the [Research Grants Handbook](#) for full details of requirements.
19. Note: No funds are awarded for use of ARCHER2, or Monsoon2 because the facilities are paid centrally by NERC and are free at the point of use.

**Assessment of HPC Requests – ARCHER2 only**

20. Completed new applications will be peer reviewed by the NERC HPC SC at the next of their bi-annual meetings. Resources are approved for the first year only.
21. In order to maximise use, over allocations may be made. Therefore, CU approved for the first year, or estimated for future years cannot be guaranteed.
22. For each subsequent year of usage (April-March) users must update their request by submitting a [continuation form](#) for each grant utilising HPC by the closing date on the HPC website. These are reviewed at the annual spring meeting of the HPC SC. Users will be contacted about this.
23. The committee requires a separate continuation form for each grant, because it is important for resource allocation purposes and to help monitor outputs associated with HPC investment.

24. Please note that the HPC SC may make adjustments to the amount requested/approved or request further information/justification for the request.

### **Jointly Funded Awards**

25. For awards funded by two or more Research Councils, the HPC allocation will be discussed by the relevant councils. In general, the HPC provision will be split in the same proportions as the funds. Assessment and allocation procedure will follow that of the major funder. If the council is not buying a share of ARCHER2, use will be charged, at partner rate, in the proportion of funding from that council in April each year.

### **Interruptions**

26. NERC recognises that it is sometimes inevitable that research may be delayed due to unforeseen circumstances e.g. due to maternity or sick leave. The HPC SC would like to be informed of any delays to the work and/or use of HPC, in order to enable effective use of the annual allocation.

### **Access to ARCHER2 by Non NERC Funded Grants**

27. Scientists in the NERC remit with other funding may access ARCHER2 through the NERC consortia if there is sufficient available resource. Access via international projects (eg PRACE) is managed by EPCC/EP SRC, depending on the circumstances. Further information can be found at the bottom of the [NERC HPC landing page](#).
28. Please see NERC Policy on [Non NERC funded or International Grants](#) for advice on other funding or EU schemes, eg ERC/Framework Programmes.
29. To reduce risk of disappointment, potential HPC users not directly funded by NERC, particularly those applying for European Union funds, should note that NERC does not expect to fund the costs of their HPC. For applications within the NERC remit, where resource is available and access is through one of the NERC consortia, partner rate can be applied (£0.20/CU, plus VAT).
30. In the case of non NERC funded awards with large and critical HPC requirements, the NERC HPC SC welcomes early discussion of HPC options.

### **JASMIN**

31. For use of JASMIN, please contact the relevant NERC HPC consortia leader (4 above) or see <https://jasmin.ac.uk/users/access/>

### **Acknowledgement**

32. NERC expects users of HPC to formally acknowledge use of ARCHER2, its predecessor ARCHER, NEXCS, Monsoon2, MONSooN, eCSE and JASMIN on all publications resulting from such use, including after a lapse of time.

Please see Paragraph 271 of the [Research grants and fellowships handbook](#) and refer to the approved [HPC acknowledgement form of words](#).

## Further Queries

33. Please address your more general queries to [hpc@nerc.ukri.org](mailto:hpc@nerc.ukri.org)

### Change Log:

April 2010	New document
<b>Amendments</b>	
October 2011	
January 2012	
June 2012	Update EU advice; Clarify form requirement; Limit pa over the whole project for joint awards
August 2012	Add note re notification of interruptions
May 2014	Replace HECToR with ARCHER; general updates
June 2014	Add Monsoon2 acknowledgement
July 2014	Update for new Je-S release (Costs/units)
Sept 2014	Update for new funding schemes/procedure
Feb2015	Update costs(P2) and limit for NC review
April 2015	Update total allocation and form limit
Sept 2015	Notes about justification and overallocations
Dec 2015	Add 'state HPC form attached to JeS'; Amend NC review 17: '..not been through a formal review...'
August 2017	Update for NEXCS; Note 11 Remove RDF (units of use).
June 2018	Update paragraphs 32 - 34
August 2021	Update for ARCHER2; Remove mention of 'ARCHER' and 'NEXCS' and resource units updated from 'MAU' to 'CU'