ARCHER2 Technical Assessment Form: Pump Priming Applications

**Note: this form is for Pump Priming applications. Technical Assessment forms for other access routes can be found on the ARCHER2 website at** [**http://www.archer2.ac.uk/support-access**](http://www.archer2.ac.uk/support-access)**.**

**Instructions:**

1. Complete Section 1 below as fully as possible. If you have any questions or require clarification, please contact the ARCHER2 service desk ([support@archer2.ac.uk](mailto:support@archer2.ac.uk)).
2. Return the completed form (as a Word document) to the ARCHER2 service desk ([support@archer2.ac.uk](mailto:support@archer2.ac.uk)).
3. The ARCHER2 CSE team will complete Section 2 and will contact you directly for more information if it is required. This may take up to 8 working days from receipt of the completed form.
4. The complete form will be forwarded to UKRI by the ARCHER CSE team for a decision on whether to grant the application.
5. You will be notified by the helpdesk of the outcome of this application and, if successful, a project will be created for you and your users on the ARCHER service.

**Notes:**

* Only work that falls within EPSRC’s remit can be considered for Pump Priming access.
* The maximum project duration is 6 months.
* You can apply for a maximum of 4000 CU.

Completion of this form implies permission for user details to be stored in the Service Partners’ and UKRI’s databases and to be used for mailing, accounting, reporting and other administrative purposes. Please also see the ARCHER2 service policies at <https://www.archer2.ac.uk/about/policies/>.

# Section 1: HPC Resources and Case for Support (*To be completed by the applicant*)

1. **Project Information.**
   1. **Project Title:** [Enter project title]
   2. **Application Type:** [Grant]/[Access to HPC]/[Pioneer Project]/[non UKRI Funding Body]
   3. **PI Name and Contact Details**

|  |  |
| --- | --- |
| **Name:** | [Please Complete Table] |
| **Department:** |  |
| **Institution:** |  |
| **Position Held:** |  |
| **Address:** |  |
| **Postcode:** |  |
| **e-Mail:** |  |
| **Telephone:** |  |
| **Nationality:** |  |

* 1. **Contact details for application (if different from PI above)**

|  |  |
| --- | --- |
| **Name:** | [Please Complete Table] |
| **Department:** |  |
| **Institution:** |  |
| **Position Held:** |  |
| **Address:** |  |
| **Postcode:** |  |
| **e-Mail:** |  |
| **Telephone:** |  |
| **Nationality:** |  |

* 1. **Proposed start date of ARCHER2 use:** [Enter start date]

1. **Previous Use of HPC Resources.** 
   1. **Are you an existing ARCHER2 user?** [Yes/No]
   2. **Which other HPC services have you used?**

[Enter list of other HPC services]

1. **ARCHER2 Software and Support Requirements.**

## Summary of software requirements.

**Research Software Packages**

What are the main codes you will be using? A description of available research software on ARCHER2 is given at <https://docs.archer2.ac.uk/research-software/>. Please provide links to codes/software not presently available on ARCHER2.

[Enter list of codes with links to descriptions if possible]

**Software requirements (e.g. compilers, libraries, tools):**

A description of available software libraries on ARCHER2 is given at <https://docs.archer2.ac.uk>. Please provide links to codes/software not presently available on ARCHER2.

[Enter list of software requirements to support your use of ARCHER2]

## Support Requirements Do you require support from the ARCHER 2 CSE service to port and optimize your code on ARCHER2? If yes, please briefly describe the support required. Yes/No

[Enter a description of the ARCHER2 support required, if required]

**Please summarise any other support requirements for this project:**

[Enter any other support requirements]

1. **Proposed Use of ARCHER2 Resources.** 
   1. **Job size mix for the project**

You may find it easier to complete this section after completing section 6 below.

The online kAU calculator (<https://www.archer2.ac.uk/support-access/cu-calc.html>) can be used to help complete this table and contains a list of CU rates.

Successful Pump Priming projects receive 4000 CU to be used over a 6-month period so please ensure that your job requests fit within this allocation

**There are 128 cores per node on ARCHER2**.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Largest Job | Typical Job | Smallest Job |
| Number of nodes | [Please Complete Table] |  |  |
| Number of cores used per node (usually 128) |  |  |  |
| Wallclock time for each job (Max. 48h) |  |  |  |
| Number of jobs of this type |  |  |  |
| Total memory required. |  |  |  |

**Total CU:** [Enter total CU required, 1 CU equates to 1 node hour on ARCHER2 ]

**Notional Cost:** [Enter total notional cost, each CU costs £0.20]

* 1. **Disk space requirements.**

You may find it easier to complete this section after completing Section 7 (Data Management and Transfer) below.

/home: Small, backed-up. For project critical files (e.g. source code).

/work: Large, high-performance, not backed-up. For input and output from calculations.

|  |  |
| --- | --- |
|  | Storage |
| /home (required) | [e.g. 10 GB] |
| /work (required) | [e.g. 1 TB] |

1. **Case for Support**

Please provide a brief summary (maximum 1 page) stating why you are applying for ARCHER2 Pump Priming access. This should cover:

* Scientific problem being addressed
* Justification for the compute resources requested (how did you arrive at the job size mix specified in 4.1 above)
* Justification of the disk space requested (how did you arrive at the figures specified in 4.2 above)

[Enter Case for Support]

1. **Data Management and Transfer**

This section asks some basic questions about the data generated on ARCHER2 by the proposed calculations. You may find the advice in the ARCHER2 User and Best Practice Guide useful in answering these questions, see:

<https://docs.archer2.ac.uk/user-guide/data/>

**7.1 How many files are typically produced by each job?**

[Enter the estimated number of files. This does not need to be exact, order of magnitude is sufficient here. For example, 1000 files per job. You should also state how these files are organised; for example, are they all stored in one directory or is there a hierarchy of directories?]

**7.2 How much data is read in by each job?**

[Enter estimated total size in kB/GB/TB]

**7.3 How much data is produced by each job?**

[Enter estimated total size in GB/TB/PB]

**7.4 What percentage of the produced data do you expect to transfer off ARCHER2?**

[Enter estimated percentage]

**7.5 How do you plan to transfer data from ARCHER2 to elsewhere?**

[Please describe the mechanism you will use to transfer data from ARCHER2 to other systems for further analysis or archive. Please also state the sites that you will be transferring data to. You should also state roughly the amount of data that will be transferred in each transfer instance (i.e. how will the transfers be batched up).]

# Section 2: Technical Assessment (*To be completed by CSE team).*

**Date Received by CSE:** [Enter received date]

|  |  |
| --- | --- |
| Do the applicants have the technical expertise required for the proposed work? | Yes/No |
|  | |

|  |  |
| --- | --- |
| Is the software specified technically suitable for ARCHER2? | Yes/No |
|  | |

|  |  |
| --- | --- |
| Is the compute time requested reasonable and has the job breakdown been technically justified? Are the storage requests reasonable? | Yes/No |
|  | |

|  |  |
| --- | --- |
| Is the data management and transfer plan reasonable and technically sound? | Yes/No |
|  | |

|  |  |
| --- | --- |
| Does the project require the technical capabilities of ARCHER2? | Yes/No |
| Would a different computing resource be more appropriate? | Yes/No |
|  |  |

**Is the application, as outlined above, suitable for access to the ARCHER2 service?** **Yes / No**

**Name:** [Enter name]

**Position:** [Enter job title]

**Date:** [Enter date completed]