ARCHER Technical Assessment Form: Instant Access

**Note: this form is for Instant Access applications only. Technical Assessment forms for other access routes can be found on the ARCHER website at http://www.archer.ac.uk/access**

**Instructions:**

1. Complete Section 1 below as fully as possible. If you have any questions or require clarification, please contact the ARCHER helpdesk ([support@archer.ac.uk](mailto:support@archer.ac.uk))
2. Return the completed form (as a Word document) to the ARCHER helpdesk ([support@archer.ac.uk](mailto:support@archer.ac.uk)).
3. The ARCHER CSE team will complete Section 2 and will contact you directly for more information if it is required. This may take up to 10 days from receipt of the completed form.
4. The complete form will be forwarded to EPSRC 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 Instant Access.
* The maximum project duration is 6 months.
* You can apply for a maximum of 1200 kAU.

Completion of this form implies permission for user details to be stored in the Service Partners’ and Research Councils’ databases and to be used for mailing, accounting, reporting and other administrative purposes.

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

1. **Project Information.**
   1. **Project Title:** [Enter project title]
   2. **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:** [Enter start date]

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

[Enter list of other HPC services]

* 1. **If you have used other HPC services please provide a brief summary of the number of core hours used and the types of jobs run (codes, core counts, typical job lengths):**

[Enter summary of previous service usage]

1. **ARCHER Software and Support Requirements.**

## Summary of software requirements.

**What are the main codes you will be using? A description of available software on ARCHER is given here** [**http://www.archer.ac.uk/documentation/software/**](http://www.archer.ac.uk/documentation/software/)**. Please provide links to codes/software not presently available on ARCHER.**

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

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

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

## Support Requirements How do you plan to port and optimize your code on ARCHER (delete as appropriate)?

|  |  |
| --- | --- |
| Expertise in your group | Yes/No/NA |
| ARCHER CSE Support | Yes/No/NA |
| Other (please specify) |  |

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

[Enter any other support requirements]

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

The online kAU calculator (<http://www.archer.ac.uk/access/au-calculator/>) can be used to help complete this table and contains a list of kAU rates.

**There are 24 cores per node on ARCHER**. Generally we would expect users to use all cores on a node. If you cannot use all cores on a node please ensure you have stated why in Section 5 below.

Successful instant access projects receive 1200 kAU to be used over a 6-month period so please ensure that your job requests fit within this allocation.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Largest Job | Typical Job | Smallest Job |
| Number of nodes | [Please Complete Table] |  |  |
| Number of cores used per node (usually 24) |  |  |  |
| Wallclock time for each job (Max. 48h) |  |  |  |
| Number of jobs of this type |  |  |  |
| Total memory required. |  |  |  |

**Total kAU:** [Enter total kAU from kAU calculator]

**Notional Cost:** [Enter total notional cost from kAU calculator]

* 1. **Disk space requirements.**

/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.

RDF: Large, backed-up, long-term. Data analysis and long term data storage.

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

1. **Case for Support**

Please provide a brief summary (maximum 2 pages) stating why you are applying for ARCHER Instant 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 ARCHER by the proposed calculations. You may find the advice in the ARCHER Data Management Guide useful in answering these questions, see:

<http://www.archer.ac.uk/documentation/data-management/>

Projects on ARCHER can also request space on the RDF and gain access to the RDF Data Transfer Nodes and Data Analytic Cluster. For more information on the RDF, see:

<http://www.archer.ac.uk/documentation/rdf-guide/>

**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?**

* To the RDF? [Enter estimated percentage]
* Off ARCHER/RDF? [Enter estimated percentage]

**7.5 How do you plan to transfer data from ARCHER to the RDF?**

[If you plan to use the RDF to store, transfer and/or analyse data please describe the mechanism by which you will move data from ARCHER to the RDF. Will these transfers be manual or automated? 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).]

**7.6 How do you plan to transfer data off ARCHER/RDF?**

[Please describe the mechanism you will use to transfer data from ARCHER/RDF to external sites 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 ARCHER? | 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 |
|  | |

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

|  |
| --- |
| Does the project require the technical capabilities of ARCHER?  Would a different computing resource be more appropriate? |
|  |

**Name:** [Enter name]

**Position:** [Enter job title]

**Date:** [Enter date completed]