

UKRI computational resources available for urgent COVID-19 research

UKRI supports a wide-range of computational capabilities that can be requested by researchers seeking to contribute to the understanding of, and response to, the COVID-19 pandemic and its impacts.

How can I access UKRI computational capabilities?

Researchers seeking:

- short-term projects addressing and mitigating the health, social, economic, cultural and environmental impacts of the COVID-19 outbreak should apply to the [UKRI COVID-19 open call](#). Details of computational resources requested should be included in section 3 of the application form.
- projects involving a public health outcome within 12 months should apply to the joint DHSC/UKRI COVID-19 Rapid Response Initiative's rolling call via the [NIHR single portal site](#).
- access to the pan-European PRACE infrastructure should apply to the [PRACE fast-track COVID-19 call](#).
- access through existing UKRI-supported scientific consortia, such as the [EPSRC High End Computing \(HEC\) Consortia](#), should continue to apply through existing routes. Additional resources have been made available to the [HECBioSim consortium](#) for researchers working on urgent COVID-19 related biomolecular simulations.

What resources are available?

Researchers can request access to any of the following UKRI resources. If you are unsure which resource is most appropriate for your research, please describe your requirements in the proposal above and we will assist.

- **The ARCHER national supercomputing service:** <http://archer.ac.uk/>
- **The STFC scientific community computing resources comprise those of**
 - STFC Scientific Computing Department,
 - The Hartree Centre,
 - The DiRAC HPC Facility (<https://dirac.ac.uk/>)
 - The GridPP HTC Facility

Between them they have more than 10 PetaFlops of computing power available, and significant data storage capacity. These are coordinated via the IRIS consortium (<https://www.iris.ac.uk/>).

- **NERC JASMIN super-data-cluster** <http://www.jasmin.ac.uk>
 - Individuals are invited to contact support@ceda.ac.uk or call the JASMIN helpdesk (01235 4464 32) in the first instance.

- **EPSRC Tier-2 Supercomputing Services**

- **Cambridge Service for Data-Driven Discovery (CSD3):**
<https://www.hpc.cam.ac.uk/high-performance-computing>
- **The Materials Modelling Hub:** <https://mmmhub.ac.uk/>
- **JADE: the Joint Academic Data Science Endeavour:** <http://www.jade.ac.uk/>
- **HPC Midlands Plus:** <http://www.hpc-midlands.ac.uk/>
- **Isambard:** <http://gw4.ac.uk/isambard/>
- **Cirrus:** <http://www.cirrus.ac.uk/>
- **Kelvin-2 - The High Performance Computing Centre in Northern Ireland:**
<https://pure.qub.ac.uk/en/projects/kelvin-2-the-high-performance-computing-centre-in-northern-irelan>
- **Northern Intensive Computing Environment:** <https://n8cir.org.uk/news/northern-intensive-computing-environment/>

- **JISC Network Services**

- **Janet end-to-end performance support**

Research may require a significant amount of large data sets to be transferred between sites over our national research and education network, Janet. Whilst the Janet core network is designed to have more than enough headroom capacity, that is not the only factor in the network or end systems which can impact data transfer performance. JISC can provide guidance and support for large scale Covid-19 research projects from their Janet end-to-end performance Initiative – to access this please contact them via the Jisc service desk: 0300 300 2212, help@jisc.ac.uk, 07:00 - 00:00 (Monday - Friday).

- **Resources for Life Sciences**

- **Earlham Institute National Capability in e-Infrastructure:**<https://www.earlham.ac.uk/national-capability-e-infrastructure>

HPC systems for Life Science research providing versatile digital platforms for 'omics-based data sharing, discovery, and analysis.

- **ELIXIR provides a range of services that can be used for studying the SARS-CoV-2 coronavirus and the COVID-19 disease** <https://elixir-europe.org/services/covid-19>
- **CyVerse UK :** <https://cyverseuk.org/>

CyVerse comprises a cloud-based Data Store and the CyVerse Discovery Environment, a virtual bioinformatics lab workbench where users can share datasets and data analysis tools.