LINKSCEEM

Cy-Tera & LinkSCEEM
HPC preparatory access
- Call for proposals

Opening date: 1st March 2011
Closing date: Rolling call, applications accepted all-year round, no closing dates

Type of access: Preparatory access

Machine(s) available:
- BA (architecture: x86_64)
- CaSToRC (architecture: x86_64 with HPC-grade GPUs)

Introduction

Scientific research in a growing and diverse number of disciplines is becoming increasingly dependent on large-scale computational resources. It is recognised by governments of regional countries and by the EU that to remain competitive, scientists in the Eastern Mediterranean area must be provided with High Performance Computing (HPC) recourses sustained by technical expertise and know-how.

Cy-Tera and the EU-funded project LinkSCEEM allows researchers from the Eastern Mediterranean to apply for time on high-end high-performance computers via a peer review process. Preparatory access allows researchers to apply for code scalability testing and also support for code development and optimisation from Cy-Tera and LinkSCEEM software experts. Preparatory access allows researchers to optimise their codes before responding to *project* calls.

Preparatory access calls are rolling calls, researchers can apply for resources all year. There are no closing dates.

Types of preparatory access

There are 3 types of preparatory access:

A. **Code scalability testing** to obtain scalability data which can be used as supporting information when responding to future Cy-Tera and LinkSCEEM project calls. This route provides an opportunity to ensure the scalability of the codes within the set of parameters to be used for Cy-Tera and LinkSCEEM project calls, and document this scalability. Assessment of applications is undertaken using a light-weight application procedure with application evaluated at least every 2 months. The maximum allocation time is 6 months which includes submission of the final report.

B. **Code development and optimisation by the applicant** using their own personnel resources (i.e. without development support from Cy-Tera or LinkSCEEM staff). Applicants will need to describe the planning for development together with the resources that are available to execute the project. Applications will be assessed at least every 2 months. The maximum allocation time is 6 months which includes submission of the final report.

C. **Code development with support from experts from Cy-Tera and LinkSCEEM**. Assessment of the applications received will be carried out at least every two months. The maximum allocation time is 6 months which includes submission of the final report.

The *total* allocation of resources to all proposals of types A, B and C will be a maximum of 10% of the system resources at each of the partner sites.

Scope of the call

Preparatory access is intended for testing or development of computer codes for preparation for applications for Cy-Tera and LinkSCEEM project access. Standard production runs **will not be allowed** as part of preparatory access. For types B and C a detailed description of code bottlenecks is helpful for the technical assessment.

Process

The projects will be technically peer reviewed by recognised experts from the relevant regional computer center providing computer resources and LinkSCEEM partners. For more information, please visit http://www.linksceem.eu/hpcaccess.

Eligibility

The Cy-Tera and LinkSCEEM calls of 2011 are only open to academic researchers, as long as the organisation of the project leader is homed in an Eastern Mediterranean partner country or, resources permitting, to all countries in the Eastern Mediterranean region in the case of LinkSCEEM. The employment contract of the project leader with the research organisation must be valid to at least 3 months after the end of the allocation period.

Cy-Tera and LinkSCEEM HPC centres may have further restrictions on who is eligible to use the machines, for example, due to US export rules. It is the responsibility of the applicant to ensure that they are eligible to use the system

How to Apply

All proposals must be submitted via the LinkSCEEM website as described at: http://www.linksceem.eu/hpcaccess. All mandatory fields must be filled in before the application form can be submitted. After the form has been saved, applicants can continue to access it and update it before they finally submit it.

Disclaimer

Award of preparatory access proposals of all types is limited by the amount of resources available. For type C there are also limitations regarding the amount of expert support available (in terms of staff hours) and also the type of expertise available (the amount of expertise available is not the same in all fields of computer science, mathematics and fields of science and engineering).

Further details on the standard application procedure can be found on the LinkSCEEM website.

Assessment procedure

All proposals will undergo technical assessment. Assessment of proposals is undertaken using a light-weight procedure with evaluations of the applications communicated at least every 2 months.

Criteria for assessment

Proposals submitted are only for code testing or development. Only runs for testing and development will be allowed, i.e. no standard production runs will be allowed. It is advisable that proposals for types B and C identify bottlenecks during code development since efficiency is a major factor in the evaluation of proposals for production access to resources.

Contacts

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About Cy-Tera: The Cy-Tera project aims at creating a research facility including a high-performance computing (HPC) infrastructure supporting cutting-edge scientific applications, with associated user support and computational science research and training programs. The Cy-Tera facility will be the first HPC facility at multi-Tflops level in Cyprus, serving the needs of the Cyprus Institute (CyI), its partners and Cyprus for frontier research applications in many fields of great scientific and/or societal importance.

About LinkSCEEM: The LinkSCEEM-2 project aims at the establishment of a high performance computing (HPC) eco-system in the Eastern Mediterranean region by interlinking and coordinating regional compute, storage and visualization resources to form an integrated e-infrastructure.
The main project objective is to enable scientific research in the region by engaging and supporting research communities with an initial emphasis in the fields of climate research, digital cultural heritage and synchrotron radiation applications.
To achieve its mission, the project will link e-resources, provide user support and training, carry out targeted networking activities, and, develop and implement a well-structured HPC resource allocation mechanism.