

Recruitment for the Large-Scale HPC Challenge for Oakforest-PACS Supercomputer System

The Joint Center for Advanced High Performance Computing (JCAHPC) implements the Large-Scale HPC Challenge for the Oakforest-PACS Supercomputer System. The Large-Scale HPC Challenge is an open-recruitment project that allows a research group to monopolize the computational resources for a maximum of 21 hours, for the largest number of compute nodes available under the Oakforest-PACS Supercomputer System (8,192 nodes (557,056 cores)). Please see below for details on the selection criteria. We look forward to receiving your application.

User's guide

- This initiative allows users to monopolize the use of 8,192 nodes for a maximum of 21 hours once a month, in principle from 12:00 p.m. on Tuesday - 9:00 a.m. on Wednesday before the month-end processing. (With regard to the memory mode for Oakforest-PACS, about half of all compute nodes are set to flat mode, and the remaining half are set to cache mode during normal service for all users. However, on the day of the Large-Scale HPC Challenge, users under the Challenge initiative may change all compute nodes to the mode they prefer. This change is expected to take about 3 hours, so the start time for the Large-Scale HPC Challenge will be at about 12:00 p.m., and end at 9:00 a.m. the following day.)
- The projects are recruited from the public, and a wide range of projects are accepted in addition to submissions from existing users. While applications are accepted by both individuals and groups, one group is selected each month in principle.
- The results produced through the use of this initiative will be released to the public. In the disclosure of the results of the project, selected projects are required to state clearly that the project was implemented using the Oakforest-PACS Supercomputer System under the Large-Scale HPC Challenge initiative. Selected projects will also be requested to submit articles reporting on the results of the project to the PR magazine, etc., submit articles (brief reports) to peer-reviewed international conferences, etc.
- There may be cases where the selected projects are invited to present at seminars and workshops organized or co-organized by JCAHPC (or the University of Tokyo or the University of Tsukuba).
- Use of the supercomputers under this initiative is free of charge.

Recruitment schedule for FY2021 (Provisional)

The following is the provisional schedule for the recruitment of projects for the FY2021 Large-Scale HPC Challenge. (As shown below, three rounds of recruitment have been planned.)

Period of implementation	Application Deadline	Screening	Notification of Selection
Thu., Apr. 22, 2021, 12 p.m. – Fri., Apr. 23, 2021, 9 a.m. Tue., May 25, 2021, 12 p.m. – Wed., May 26, 2021, 9 a.m. Tue., June 22, 2021, 12 p.m. – Wed., June 23, 2021, 9 a.m. Tue., July 27, 2021, 12 p.m. – Wed., July 28, 2021, 9 a.m.	Mon., Feb. 15, 2021, 5 p.m. [Deadline]	End-Feb. 2021	Early Mar. 2021
Tue., Aug. 24, 2021, 12 p.m. – Wed., Aug. 25, 2021, 9 a.m. Thu., Sep. 23, 2021, 12 p.m. – Fri., Sep. 24, 2021, 9 a.m. Tue., Oct. 26, 2021, 12 p.m. – Wed., Oct. 27, 2021, 9 a.m. Wed., Nov. 24, 2021, 12 p.m. – Thu., Nov. 25, 2021, 9 a.m.	Mon., June 28, 2021, 5 p.m. [Deadline]	Early July 2021	Mid-July 2021
Tue., Dec. 14, 2021, 12 p.m. – Wed., Dec. 15, 2021, 9 a.m. Tue., Jan. 25, 2022, 12 p.m. – Wed., Jan. 26, 2022, 9 a.m. Mon., Feb. 21, 2022, 12 p.m. – Tue., Feb. 22, 2022, 9 a.m. Wed., Mar. 30, 2022, 12 p.m. – Thu., Mar. 31, 2022, 9 a.m.	Mon., Oct. 25, 2021, 5 p.m. [Deadline]	Early Nov. 2021	Mid-Nov. 2021

* The recruitment schedule is subject to changes depending on the maintenance schedule and other factors.

* It is possible to apply more than once during the year. However, please note that there are cases where your requests cannot be fulfilled due to the application situation. It is possible to use the supercomputer systems only once with each application.

Research Subjects

The Large-Scale HPC Challenge is restricted to research that involves large-scale computing using 8,192 nodes (557,056 cores). The premise is that applicants and members of research groups have a track record in large-scale computing using parallel computer systems in Japan or abroad. A wide range of research fields related to high-performance computing, as shown below, are eligible.

- Large-scale simulations
- Large-scale data processing
- Large-scale benchmarking, evaluation of the performance of computational and communications systems
- Other software execution related to large-scale computing

Eligibility for use/Screening method

Eligibility for use is determined through screening by a screening committee comprising faculty members of the Supercomputing Research Division, Information Technology Center, the University of Tokyo, faculty members of the Center for Computational Sciences, University of Tsukuba, and external committee members, based on the application documents. Applicants do not have to be existing users of the system.

Projects submitted for consideration will be selected by a screening committee. The results will be announced as soon as possible.

Applicants must be researchers affiliated with universities or public organizations in Japan, and or be parties affiliated with private corporations. In cases where the members of a research group or the applicant is from a corporation, it is necessary to submit one of the following documents.

- Photocopy of joint research agreement
(Those affiliated with a research organization that has concluded a joint research agreement with the applicant's organization)
- Photocopy of a written pledge stating that appropriate supervision will be carried out, and photocopy of contract agreement
(Employees of a corporation that has concluded a contract agreement with the applicant's organization)
- Written pledge stating compliance with the purpose of use set out in the Terms of Use
(Those affiliated with a private corporation)

Main selection criteria

- Research carried out using own coding or open-source programs.
- Computational results can be deemed to be useful to science or have social impact.
- Provides useful information to the operator or user of the system.
- Sets out the goal of using 8,192 nodes.
- Feasible plans, and possibility of producing effects in a short time (each period of use is for a maximum of 21 hours).

Application for use

Read the application guidelines and Terms of Use for Supercomputer Systems of the Information Technology Center, the University of Tokyo carefully, and fill in the necessary fields in the application form. Please submit the completed application form by e-mail to the office for the submission of the application form stated below.

* When submitting the documents, send them in PDF format.

The following are compulsory fields that must be completed in the application form.

1. Date of application
2. Requested period of use
3. Applicant's information (Name, affiliation, designation, contact address, e-mail, telephone)
4. Project title (Japanese, English), overview
5. Contents and goals of project
6. From the research achievements of the applicant and research group members in the relevant field, please provide a separate print of a representative paper as the record of use of large-scale computing systems.
7. Program information, schedule for use, etc.
8. Requests, special remarks
9. Information of research group members (Name, affiliation, designation, role in the research project)

Submissions/Inquiries

[Submissions]

E-mail: koubo(at)cc.u-tokyo.ac.jp (Please convert "(at)" to "@" before sending the e-mail.)

Research Support Team, Information Strategy Group, Information Systems Department, The University of Tokyo

[Inquiries]

E-mail: uketsuke(at)cc.u-tokyo.ac.jp (Please convert "(at)" to "@" before sending the e-mail.)

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