**Center for Computational Sciences, University of Tsukuba**

**2021 Multidisciplinary Cooperative Research Project (MCRP-L)**

Date(YYYY/MM/DD):　 / /

(Please carefully read “Call for proposals”.)

1. **Project name and representative**

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| **Representative (Surname, Given names):**  **Affiliation:** |
| **Project name (English):**  **課題名(日本語)：(if available)** |

(You can enlarge the following spaces, up to the maximum 6 pages in total.)

1. **Scientific significance**

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| **2.1 Scientific background**  **2.2 Purpose of the Project**  **2.3 Expected achievements** |

1. **Past Research, Ongoing project, Project plan, and Requested resources**

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| **Research Achievements in the past**  (Describe summary of your research achievements in the current subject. The publication list is not required here.)  Provide the (hyper)link to your report for 2019 MCRP here, if you have.  https://project.ccs.tsukuba.ac.jp/event/14/papers/\*\*\*/files/\*\*\*.pdf  -------------------------- |
| **Ongoing MCRP**  Do you currently have ongoing projects of MCRP in 2020? [Yes / No]  If Yes, fill in the following:   |  |  |  | | --- | --- | --- | | Name of Computer | OFP | Cygnus | | Project code | xg\*\*\*\*\*\* | \*\*\*\*\*\*\*\* | | Initially approved resources (node×hour) |  |  | | Used resources so far (node×hour) |  |  |   If No, provide your desired project code name for Cygnus (within 8 letters):  Describe its relation to the present proposal (2021): |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Project Target and Plan for 2021.4 – 2022.3**   |  |  |  | | --- | --- | --- | | Requested resources | OFP | Cygnus | | node×hour |  |  | | Maximum # of nodes |  |  | | Disk capacity | 20 TB | 15 TB |   **Utilization Plan for 2021.4 – 2022.3** |

**３. Preparation and Reason for Requested Resources**

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| **Preparation Status** (Program development, Test operation, etc .)  Provide the following information for each program.   |  |  |  |  | | --- | --- | --- | --- | | System | [ Cygnus / Oakforest-PACS] | | | | Program name |  | | | | Parallelization method | [ MPI / OpenMP / MPI+OpenMP / others( ) ] | | | | Parallel efficiency measurement | Scaling | [ Strong / Weak ] | | | Total # of threads () | *m* = | *n* = | | Execution time | *Tm* = sec | *Tn* = sec | | Effective parallelism\*1 | *α* = % | | | Product run | Target # of threads | OFP: N= | Cygnus: N= | | Parallel efficiency\*2 | *EN*= | *EN*= |   (If you use more than one program, copy and repeat this table. If you apply for resources of both Cygnus and OFP larger than the maximum limit of the MCRP-M category, you must show this for both.) |
| **Necessity and Reason of Requested Resources** |
| **2021 HPCI application** (<http://www.hpci-office.jp/folders/english>)  Have you applied for the 2021 HPCI application as a representative? [ Yes / No ]  If Yes, provide the following:  Name of computer:  Project name (Japanese and/or English): |

Note:

\*1 Effective parallelism (parallelization ratio) is given by, in case of strong scaling,

and in case of weak scaling,

\*2 Parallel efficiency is given by