METUWIND HPC Cluster Usage Policy

June 4, 2015

1   General Conditions of use

Use of METU Center for Wind Energy (METUWIND) High Performance Computing (HPC) resources is subject to METU Information Technology Resources Use Policy. By logging in into the METUWIND HPC computers all users implicitly agree to abide by these rules in addition to the rules a conditions detailed in this document.

2   Service Levels

The METUWIND HPC facilities operate on a principle of different service levels. These are broadly classified as paying users, METU members, and academic users outside METU.

METUWIND will require a formal application for the use of HPC resources detailing area of research and required CPU time. The application form is located at the last page of this document.

2.1   Service Level I: Free Usage for METU members

Currently METUWIND HPC facilities are made available to METU members and METUWIND associated researchers. METUWIND reserves the right to make changes to this arrangement, should the need arise. The time and resource limitations, if any, are set by METUWIND (qos-2). Jobs submitted by METU members may preempt users defined in *Service Level III* when the system is heavily loaded.

2.2   Service Level II: Paid Usage

This constitutes users who have made payment in return for HPC services, and operates with the highest quality of service qos-1. Paying users, depending on the contract signed, may have exclusive use of various resources on the HPC system. Under normal circumstances, advance payment is required. The priority of the jobs run by the paying users is equal to or grater than that for the METU members. Jobs of paying users may preempt other users while the system load is critical. Resources used by this class of users are monitored and reported to the users by METUWIND.

2.3   Service Level III: Residual Usage for Academic Users Outside METU

The system can be made available to non-METU academia members, on METUWIND's discretion. The priority of this class of users is below the priority of service levels I & II. Users within this category operate with qos-3.

3   QOS descriptions

3.1   qos-1: highest quality of service

1. qos-1 jobs have the highest priority and move through the queue fastest.

2. `qos-1` jobs have a maximum run time of 96 hours.

3. Each `qos-1` job can use a maximum of 192 cores at any given time.

4. Total number of cores in use by all `qos-1` jobs cannot exceed a maximum of 192 cores at any given time.

3.2 qos-2: medium quality of service

1. `qos-2` jobs have the medium priority and move through the queue slower than `qos-1` jobs.

2. `qos-2` jobs have a maximum run time of 48 hours.

3. Each `qos-2` job can use a maximum of 192 cores at any given time.

4. Total number of cores in use by all `qos-1` jobs cannot exceed a maximum of 192 cores at any given time.

3.3 qos-3: lowest quality of service

1. `qos-3` jobs have the lowest priority and move through the queue slowest.

2. `qos-3` jobs have a maximum run time of 24 hours.

3. Each `qos-3` job can use a maximum of 64 cores at any given time.

4. Total number of cores in use by all `qos-3` jobs cannot exceed a maximum of 64 cores at any given time.

3.4 qos-debug: debug quality of service

1. `qos-debug` is meant to enable creation of scaling graphs and debugging of parallel programs.

2. `qos-debug` jobs have a maximum run time of 1 hours.

3. Each `qos-debug` job can use a maximum of 256 cores at any given time.

4. Total number of cores in use by all `qos-debug` jobs cannot exceed a maximum of 256 cores at any given time.

3.5 Queue overview

Queue name	Number of Cores Per Job	Total cores	Maximum run-time (hrs)
qos-1	192	192	96
qos-2	192	192	48
qos-3	64	64	24
qos-debug	256	256	1

4 Availability and Maintenance

METUWIND will make every reasonable effort to maintain the HPC system operational on a 24/7 basis, however cannot guarantee prompt resolution of problems faced by users. Every effort will be made to notify the users of upcoming maintenance activities and their duration.

5 Additional Policies

Analyses directed and/or undertaken by METUWIND always operate with `qos-1` and maintain absolute priority.

Users of the METUWIND HPC facilities are expected to mention the use of the resources in their publications. METUWIND appreciates receiving digital copies of the said published works for archival purposes.

6 METUWIND HPC Resources Request Form

Please fill in the following form and e-mail it to `ruzgem@metu.edu.tr` in order to request access to METUWIND HPC infrastructure.

1. Name, Surname of the Applicant:

2. Affiliation of the Applicant:
   - ○ Middle East Technical University (METU)
   - ○ Non-METU Academic institution (please provide below)

   - ○ Private Sector (please provide below)

3. Address, contact details (phone number, e-mail):

4. Name of the applicants project:

5. Short Description of the Project:

6. Does the project have funding for HPC use?
   - ○ Yes   ○ No

7. Requested computing time (CPU core hours):

8. Is a short parallel efficiency report enclosed? (Strongly recommended, see METUWIND HPC page for an example)

◯ Yes   ◯ No