

Draft Allocation and User Policy Document

Louisiana Optical Network Initiative Resource Allocation Committee

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LONI Allocations

LONI maintains several systems (insert description and website here) including both AIX and linux architectures:

Project Principle Investigators (PIs) must apply for and be awarded an allocation to gain access to these systems. Allocations are accounted for with Service Units (SUs) and are awarded on a per machine basis. Currently, one SU corresponds to one hour of wallclock time on one CPU. For example, if a job runs for 1 hour of wallclock time on 16 processors the project is charged 16 SUs, or if a job runs for half an hour of wallclock time on 12 processors the project is charged 6 SUs. Jobs are allowed to allocate an entire node in order to use all the shared memory on a node, even if only 1 processor is used. In this case, the user would still be charged 1 SU/hour for each processor on the node even though only 1 processor is being used.

LONI resources will be allocated by different organizations depending on the size and nature of the request:

- Economic development, 10%, allocated by the Management Council (MC)
- Discretionary, 10%, allocated by the MC
- Large requests (over 50,000 SU's), 45%, allocated by the LONI Resource Allocation Committee (LRAC)
- Small (less than 50,000 SUs), 30%, allocated by the six member LONI institutions (LSU, LaTech, ULL, UNO, Southern, Tulane), 5% to each institution
- Non-member LONI institutions located in Louisiana, 5%, allocated by the LRAC

The application process will vary depending the reviewing committee. For the LRAC, requirements are as follow:

Applicants submit via a web interface. A formal proposal is required, not to exceed 15 pages in length, plus references. The proposal must supply a scalability analysis. Additionally, it also gives a detailed history of the project, including a listing and description of the machines on which their codes have run in the past and the facilities which the group has utilized. The proposal provides detailed information about the largest runs the project has successfully completed with their codes and discuss any difficulties and resolutions encountered during those runs.

It should be emphasized that the "not to exceed" page limit is *not* a target page limit. The page limit was chosen with an eye to making it relatively easy to compose an allocation request, or to modify and reuse a successful application made to another center. The page limit *may* be exceeded for funded research grants that seek computational resources as part of the work. In this case, a copy of the funded proposal (without budget pages and other non-essential material) may be submitted even if the page limit is exceeded. Scientific merit and computational need, not word count, are the important criteria. Applications for allocation renewals should ideally cite peer reviewed publications that acknowledge LONI resources and only require an updated version of a previously successful application.

Project allocations are competitively reviewed and granted based upon the description of the proposed research and the use of technology with priority given to funded research. All decisions will be made by the Allocations Committee and are deemed final. Appeals can be directed to the MC or designee.

Allocation of SUs is awarded on a project basis with a PI for each project responsible for authorizing accounts to project members and managing resource usage among project members. Tools to manage such account authorizations and allocation usage will be provided via

commandline or webbased applications. Proposals for allocations, except for startup allocations, will request the appropriate number of SUs for a calendar year and PIs must carefully budget their usage accordingly throughout the year.

Allocations may be applied for at <http://allocations.loni.org/>. When an allocation expires, batch submission will be disabled. As an allocation nears completion, email reminders may be sent to the PI and any authorized accounts notifying them of this fact. Logins will be disabled if they have had no allocation available to them for one year. Allocations are granted at the beginning of every quarter and have a duration of one year. Application deadlines will be one month prior to the start date. Start dates are January 1, April 1, July 1, and October 1. PIs may request or be requested to make a formal presentation to the Allocations Committee. At the end of any allocation (except startups), a short summary report is submitted to the Allocations Committee. A request for allocation renewal may be included with the summary report.

A summary of each approved project will be kept at <http://www.loni.org/??>. Examples of well-written proposals will also be provided to aid future applicants.

Renewal Applications

For renewal applications, a user's previous usage will be considered in determining allocations.

User Policy

Each LONI user assumes certain responsibilities when using the resources at LONI.

1. Only work authorized in the original request for an account is permitted. Programs and data of a personal nature are not authorized. Users should be prepared to justify that all programs and data are directly related to authorized projects.
2. It is illegal to copy and/or distribute proprietary software without the approval of the software owner. Permission must be obtained from the owner of the software before any proprietary software is copied and/or installed on LONI resources.
3. It is required that users with allocations approved by the LONI allocations committees acknowledge LONI support in all publications and send a copy of each to LONI. Send publications or links to publications to the following e-mail address: allocations-publications@loni.org.
4. Each user is required to protect his or her password(s) and passwords must never be shared. Users who believe a password has been compromised should change that password immediately and notify LONI security at: security@loni.org.
5. Users are solely responsible for the security of their programs and data. Users are responsible for backing up critical data. Filesystems and archival storage systems are very reliable, however, data can be lost or damaged due to media failures, software bugs, hardware failures, and other problems.
6. Individuals using LONI resources without authorization, or in excess of their authority, are subject to having all of their activities on the system monitored and recorded by system personnel. In the course of monitoring unauthorized individuals using these resources, the activities of authorized users may also be monitored. By using LONI resources you consent to such monitoring and are advised that if such monitoring reveals possible evidence of criminal activity, system personnel may provide the evidence of such monitoring to law enforcement officials. Policies in this regard can be found at ****<http://www.ucop.edu/ucophome/policies/ec/> section IV.B. and <http://security.sdsc.edu/policy/MonitoringPolicy.html>****put in relevant link.
7. Violations of LONI policy can result in removal of access to LONI resources and possibly civil and criminal prosecution. LONI Information Technology policies, standard and guidelines are available at ****<http://security.sdsc.edu/PSG>****. You are responsible for reading and following LONI policies.

I have read the preceding and all LONI policy documents and understand my responsibilities as an LONI user.

Name _____ Institution or Company _____
(Please print)
Login Name(s) _____ E-mail _____
(At LONI site)
Phone _____ Fax _____ Academic Status _____
Signature _____ Date _____

To prevent interruption of service, please read, FirstName Lastname FAX :225-123-4567 sign, and return this form as soon as possible to: Address

Publication tracking

Information from any publications resulting from the use of LONI resources must be reported using the webform at [\(\)](#).

Usage policies

Queue usage:

Various workload balancing algorithms will be used to determine which jobs are started in a particular queue. The details can be found at <http://www.loni.org/>. Efficient use of the queuing system requires that users request runtimes that are consistent with the actual runtimes of their jobs; in particular, requesting more time than is necessary for a particular job can lead to inefficient and unfair queuing. Therefore, users that routinely request more time than is needed for their jobs are subject to a “priority penalty” that will lower the priority of their jobs. The maximum number of jobs that a single user may have running without special permission (see below) is 12 and there is no limit to the number of jobs that are particular use may have queued. Users that wish to obtain a higher priority for their jobs may use special priority queues (see below).

Queues

The processors are divided into 2 groups, AIX based and Linux based (details to be found at www.loni.org). Each group of processors is further subdivided into a preemptory pool and a dedicated pool. **Explain preemptory queue [from management council]**. The queues associated with the processors include a Preempt queue, which will consist of processors in the preemptory pool, dedicated queues, which will consist of processors in the dedicated pool, checkpoint queues, which will include all processors, and priority queues (see Special Priority below). The checkpoint queue is to be used by programs that periodically save job restart information to disk, enabling jobs to continue from where they stop in the event of accidental or intentional job termination. Jobs in the checkpoint queues, which happen to be running when a job is submitted to the Preempt queue, are subject to immediate termination; hence the term checkpoint.

Jobs that can be checkpointed thus have access to all available processors. Jobs that cannot be checkpointed must be submitted to the dedicated queues if they are required to run to completion. The current list of queues is located at (website).

[an initial list of queues is included here for the purpose of feedback from users]

Size of preempt queue: 10% of available processors

Size of dedicated queue: 90% of available processors

Dedicated short queue – 48 hour max - 80% of dedicated processors

Dedicated long queue – 5 days max - 20% of dedicate processors

Preempt – 48 hours

Checkpt – 48 hours

Special Priority

Users that require “high priority” queue access can use a special Priority queue to have their jobs placed at the head of the queue. Jobs in the priority queue will be charged an SU penalty (initially set to 1.3) and no more than 20% of an allocation can be used in the priority queue. There will be a priority queue associated with both the checkpt and dedicated-long queues.

Disk Usage

"Currently disk space usage is controlled via quotas, viewable at <http://www.loni.org/systems/storage/>. Storage may become an allocated resource in the future.

Policy for “special requests”

A request for special access to LONI machines (such as usage of an entire machine or special long runs) must be explicitly stated in the proposal for LONI resources. Appeals to the decision of the LRAC may be made to the Management Council.

Usage Tracking

Current and historical usage data will be kept at <http://www.loni.org/??>.