Queues and Policies

Nodes on Argon are separated into 3 types of queues:

- **Investor queues**: nodes purchased by investors. Access to these queues is managed by the investors and their delegates.
- **UI queues**: centrally funded nodes which are available to everyone who has an HPC account.
- **all.q queue**: cluster wide queue

Investor Queues

To request access to an investor queue, please contact the queue manager listed below.

<table>
<thead>
<tr>
<th>Queue</th>
<th>Node Description</th>
<th>Queue Manager</th>
<th>Slots</th>
<th>Total memory (GB)</th>
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<tr>
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<td>(1) 56-core 256G</td>
<td>Adam Dupuy</td>
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<tr>
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<td>56</td>
<td>128G</td>
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</tr>
</tbody>
</table>

Note: Users are restricted to no more than three running jobs in the COE queue.
The University of Iowa (UI) queues

A significant portion of the HPC cluster systems at UI were funded centrally. These nodes are put into queues named UI or prefixed with UI-.

- **UI** Default queue
- **UI-HM** request only for jobs that need more memory than can be met with the standard nodes.
- **UI-MPI** MPI jobs; request only for jobs that can take advantage of multiple nodes.
- **UI-GPU** Contains nodes with GPU accelerators; request only if job can use a GPU accelerator.
- **UI-DEVELOP** Meant for small, short running job prototypes and debugging.

These queues are available to everyone who has an account on an HPC system. Since that is a fairly large user base there are limits placed on these shared queues. Also note that there is a limit of 50000 active (running and pending) jobs per user on the system.
### The all.q queue

This queue encompasses all of the nodes and contains all of the available job slots. It is available to everyone with an account and there are no running job limits. However, it is a low priority queue instance on the same nodes as the higher priority investor and UI queue instances. The all.q queue is subordinate to these other queues and jobs running in it will give up the nodes they are running on when jobs in the high priority queues need them. The term we use for this is "job eviction". Jobs running in the all.q queue are the only ones subject to this.

<table>
<thead>
<tr>
<th>Queue</th>
<th>Node Description</th>
<th>Slots</th>
<th>Total Memory (GB)</th>
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<td>(60) 56-core 512G</td>
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<td></td>
<td>(54) 80-core 384G</td>
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<td>(35) 80-core 192G</td>
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<td>(20) 80-core 768G</td>
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<td>(14) 80-core 96G w/ (4) GeForce RTX 2080 Ti</td>
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<td>(10) 80-core 384G w/ (4) GeForce RTX 2080 Ti</td>
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<tr>
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<td>(8) 56-core 512G w/ (1) Tesla P100-PCIE-16GB</td>
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<td>(8) 80-core 192G w/ (1) Tesla V100S-PCIE-32GB</td>
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<td>(7) 40-core 96G w/ (4) GeForce GTX 1080 Ti</td>
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<tr>
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<td>(6) 80-core 1.5T</td>
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<td>(6) 40-core 192G w/ (4) TITAN V</td>
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<td>(6) 64-core 768G</td>
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</table>

Note that the number of slots available in the UI queue can vary depending on whether anyone has purchased a reservation of nodes. The UI queue is the default queue and will be used if no queue is specified. This queue is available to everyone who has an account on a UI HPC cluster system.

Please use the UI-DEVELOP queue for testing new jobs at a smaller scale before committing many nodes to your job.
In addition to the above, there are some nodes that are not part of any investor queue. These are only available in the all.q queue and are used for node rentals and future purchases. The number of nodes for this purpose varies.

**GPU selection policy**

For queues that consist of all nodes containing a GPU, and are split out into a QUEUE-GPU queue, the policy is to set the \texttt{ngpus} resource to 1 if not explicitly set. For other queues that contain GPU nodes the policy has been set by the queue owner to either request a GPU by default or not.