Mon, 12-Jan-2015: Sharing resources with Core Systems & Operations (CSO).

Our peers in CSO, who manage the physical aspects of the machine room (amongst a great many other duties) needed some obsolete equipment uninstalled and piled on the junk heap. We had a bit of under-utilization, so we tasked the students with solving the problem; swiftly it turned out to be no problem at all! Shown here are some of the racks they cleared for more up-to-date equipment.

CSO also received 40 servers from the Linode donation for supporting experimental virtualized computer installations. In this photo every third server is installed because of shortage of mounting rails, but eventually all were installed.
Tue, 13-Jan-2015: Racking nodes, continued...

A total of 314 servers are racked and ready to be added to the high performance computing (HPC) infrastructure, aka “Kong” or “Tartan” depending on the version of the documentation.

The servers are racked but not connected. Here a technician is installing the network connections. The final installations are performed by an NJIT full-time employee.
Wed, 14-Jan-2015:  Racking nodes, continued, continued, continued...

One-rack trial of networking connections; turns out it all fits better if the cables are fastened 5U higher.

After the trial we started another assembly-line for the four remaining sets of networking cables. Here set one of four is being assembled. An NJIT staff employee (right) is required to apply the label, so student employees (left) lay out the cables and peel the labels; the staff merely wrap the labels on the cables.
Thu, 15-Jan-2015: Wiring, testing, and BIOS

Rear view of racks showing power being connected and three teams setting BIOS configurations. The latter is necessary as we replaced their BIOS battery on every node.

Same isle from other side.

Part of the BIOS setup process includes removing nodes that fail to start; they'll be processed later.
Fri, 16-Jan-2015: One rack online!

On rack online by mid-day Friday! We could have had at least three of the eight up, excepting that only one of our switches was delivered. The headnode is able to communicate with these nodes and configuration will begin the following week.

Nodes that didn't pass the BIOS muster were diagnosed and if needed cannibalized to repair other nodes. Out of 320 about 10 had a failed PSU, one had bad mobo, and a few had RAM incorrectly paired.