Research Computing

IBM Intelligent Cluster

During the dedication of the Peter Irving Wold Center in May 2011, a donation of an IBM Intelligent Cluster was announced by John E. Kelly III ’76, senior vice president of IBM. The Intelligent Cluster provides the College with the greatest computing capability of any undergraduate liberal arts college in the nation. The cluster arrived on campus at the end of July 2011 and has been installed and configured in preparation for supporting faculty research.

Specifications of the Intelligent Cluster are:

- 88 iDataPlex servers (nodes) with Intel Xeon 5600 series processors
- Each node has 12 compute cores; a total of 1056 computer cores
- 4 nodes have 2 GPUs; a total of 8 GPUs
- 4 Management nodes
- Each node has 32 GB of memory
- 24 TB SAN storage
- 10GbE network connectivity within the cluster
- Red Hat Enterprise Linux (operating system)
- xCAT (Cluster management/provision software)
- Torque (Cluster resource management software)

Software on the Cluster

Union has licenses for many software applications that could be beneficial to a faculty member doing research. Some applications have the potential to run on the IBM Intelligent Cluster. Examples of software available for the Cluster:

- MATLAB (licensed for 128 cores)
- Mathematica (licensed for 400-1000 cores)
- GCC (GNU Compiler Collection ? includes C, C++, Fortran)

Support of the Cluster

ITS cannot guarantee 24/7 uptime for the research cluster and the applications it supports. ITS makes a best effort to keep the cluster resources available to the campus community.

Interested in Using the Cluster?
Faculty who are interested in using the IBM Cluster (known as "jupiter.union.edu") should visit our Research Computing website [1] and then contact Denise Snyder (snyderd2@union.edu [2]; x6661). Students who are interested in using the Cluster for their student research should discuss the project with their faculty advisor. The faculty advisor should then contact Denise Snyder (snyderd2@union.edu [2]; x6661).

For assistance with using the cluster, please contact the ITS helpdesk at helpdesk@union.edu [3].

Source URL: https://its.union.edu/learning-technologies/research-computing

Links:
[1] https://sites.google.com/a/union.edu/research-computing/
[2] mailto:snyderd2@union.edu
[3] mailto:helpdesk@union.edu