



Mills End-of-Life Plan and Policies Statement

The Mills high performance computing cluster has entered its fifth year of service. This UD community cluster was originally proposed to have a 5 year life span, to end in conjunction with the 2016 calendar year. Compute nodes will be taken offline in early 2017, so users should not plan for any computational work to occur on Mills after December 2016. However, IT expects to keep the cluster's home directories, /lustre/work, and /archive storage online for a longer period of calendar year 2017 to provide time for data to be moved to a permanent location.

Central IT is unable to obtain hardware support for many components of the Mills cluster, most notably the compute nodes themselves. Central IT will make efforts to keep as many compute nodes online as possible, but it is likely that the size of the Mills cluster will shrink during the course of its final year of service.

To keep the Mills cluster functional for all users during this last year, the scheduler will be updated to borrow technology from the Farber cluster and implement a new queue called "spillover". This queue has been invaluable on the Farber cluster, and it has allowed for cluster usage to routinely be higher on the Farber cluster than on the Mills cluster. In the event of a node failure, jobs destined for the failed node will spill over onto another node automatically. If a researcher schedules jobs which spill over onto a node assigned to your research group, your jobs will spill over onto another node. This methodology ensures maximum usage of the community cluster, even when nodes are offline.

As failures occur throughout the course of the year, central IT will keep track of what failures were reported for individual nodes. If it is possible to bring some failed nodes online by swapping parts with other failed nodes, this will be done. Research groups who purchased nodes in the Mills cluster were offered the option to either have central IT properly dispose of their compute nodes after the Mills cluster is retired, or to take them out of the data center and repurpose them. If you wish to pick up your nodes, please submit a [Research Computing Help Request](#) before December 23, 2016.

Mills users are urged to begin planning now for the retirement of the Mills cluster. When writing grant proposals, consider budgeting for investment in the next community cluster, which is already in its initial planning stages. Locate any critical data stored on Mills which must be retained past the cluster's lifetime and plan for the movement of that data off of the cluster. Anyone wanting to discuss their research program's needs relative to the next community cluster or their own plans for the retirement of the Mills cluster should submit a [Research Computing Help Request](#) or contact Anita Schwartz to set up a meeting.

Central IT has developed a 4 page policy detailing the specifics of retiring the Mills cluster including how node failures will be handled, the failure types which could reduce cluster functionality, what components remain under support contract, and how the “spillover” queue works. This statement, and the policy, will be published to the “Research Computing” website after this symposium. Please feel free to look for these documents at [“sites.udel.edu/research-computing”](https://sites.udel.edu/research-computing) for more information on the final year of the Mills cluster.

Thank you to all the Mills cluster users who have made, and continue to make, the Mills cluster a successful research platform whose positive influence on the University is felt far beyond the research and papers it has helped generate.