

The Grid Laboratory of Wisconsin

The Grid Laboratory of Wisconsin (GLOW) is a campus grid of the University of Wisconsin-Madison that operates using Condor technologies. GLOW hardware comprises about a thousand Xeon CPUs and about a hundred terabytes of RAID storage. These computing elements are distributed amongst six laboratory sites within the UW-Madison campus, and are connected by 1-10 Gbps campus LAN. The GLOW community includes astro-physicists (Icecube), biologists (genomics), computer scientists, engineers (chemical and materials), medical physicists, and particle physicists (CMS & ATLAS). The GLOW proposal was jointly put together by these groups and was funded by NSF MRI program. The planning of the facilities and operations review are conducted in a technical board. Standardized computing elements are deployed in the domain science group laboratories, but are centrally managed. The local groups retain highest priority for the usage of machines located in their labs. However, any resources unused by them are available to all other GLOW members. Jobs from each of the collaborating groups, and other guests from the world-wide grid flock to all GLOW sites. Domain scientists from all these fields have benefited significantly from this arrangement, by harnessing large amount of resources in short amount of time, opportunistically. The successful use of GLOW for their research has encouraged them to make substantial additions, from other funding sources, to original GLOW infrastructure. In this talk we will describe GLOW, its usage, and its benefits to the UW-Madison research community.