

Analysis of the Present and Future Usage of the Open Science Grid

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Over the last year, the Open Science Grid usage has seen a substantial increase in CPU usage; from June 2008 to January 2009, the usage went from approximately 6 million wall hours to 14 million wall hours. This increase has come from ramp-up of the WLCG experiments and increased interest from FNAL Run-II experiments. We present the current usage patterns and analyze how increased HEP usage has affected non-HEP usage of the grid. We present various means of measuring the "size" of the Open Science Grid and determining the grid-accessible portion of clusters, and discuss difficulties of performing quantitative measurements in a distributed collaborative environment. We use the OSG site at Nebraska as an example of the OSG model: it is a WLCG Tier 2 site, a campus grid site, contributor to the OSG, and has been increasingly broadening beyond physics. Finally, we look forward to future challenges presented by continued growth of the grid, especially with regards to LHC collisions.