

# **ReSS: Resource Selection Service for National and Campus Grid Infrastructure**

**Parag Mhashilkar, Gabriele Garzoglio, Tanya Levshina, Steve Timm**

Fermi National Accelerator Laboratory  
Pine Street & Kirk Road  
Batavia, IL – 60510. USA  
{parag, garzogli, tlevshin, timm}@fnal.gov

## ***Abstract***

The Open Science Grid (OSG) offers access to hundreds of Compute elements (CE) and storage elements (SE) via standard Grid interfaces. The Resource Selection Service (ReSS) is a push-based workload management system that is integrated with the OSG information systems and resources. ReSS integrates standard Grid tools such as Condor, as a brokering service and the gLite CEMon, for gathering and publishing resource information in Glue Schema format. ReSS is used in OSG by Virtual Organizations (VO) such as US CMS, Dark Energy Survey (DES), DZero and Engagement VO. ReSS is also used as a Resource Selection Service for Campus Grids, such as FermiGrid. VOs use ReSS to automate the resource selection in their workload management system to run jobs over the grid.

In the past year, the system has been enhanced to enable publication and selection of storage resources and of any special software or software libraries (like MPI libraries) installed at computing resources.

In this paper, we discuss the Resource Selection Service, its typical usage on the two scales of a National Cyber Infrastructure Grid, such as OSG, and of a campus grid, such as FermiGrid. Additionally we present workload management system requirements from the coming era of LHC data taking.