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# The OSG Open Facility: A Sharing Ecosystem Using Harvested Opportunistic Resources

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The Open Science Grid (OSG) ties together individual experiments' computing power, connecting their resources to create a large, robust computing grid; this computing infrastructure started primarily as a collection of sites associated with large HEP experiments such as ATLAS, CDF, CMS, and DZero. OSG has been funded by the Department of Energy Office of Science and National Science Foundation since 2006 to meet the US LHC community's computational needs. In the years since, the OSG has broadened its focus to also address the needs of other US researchers and increased delivery of Distributed High Throughput Computing (DHTC) to users from a wide variety of disciplines via the OSG Open Facility. Presently, the Open Facility delivers about 100 million computing wall hours per year to researchers who are not already associated with the owners of the computing sites; this is primarily accomplished by harvesting and organizing the temporarily unused capacity (i.e. opportunistic cycles) from the sites in the OSG. We present an overview of the infrastructure developed to accomplish this from flocking architecture to harvesting opportunistic resources to providing user support to a diverse set of researchers. We also present our experiences since becoming a high-throughput computing service provider as part of the NSF's XD program. Using these methods, OSG resource providers and scientists share computing hours with researchers in many other fields to enable their science, striving to make sure that these computing resources are used with maximal efficiency. We believe that expanded access to DHTC is an essential tool for scientific innovation and work continues in expanding this service.

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