

Development of Multi-Grid Resource Usage Service in LCG

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Grid Accounting has become an active research area. The accounting information provides an assurance of resource and service utilization and also contributes to various commercial usage and economic models of Grid computing. Aligned with the Open Grid Forum (OGF) standards, most of existing Grid accounting system concern about accounting within the Grid and makes it difficult to be adapted in Multi-Grid environment, such as Large Hadron Collider Grid (LCG). The LCG consists of three Grid infrastructures, each of which also has its specific accounting system. In this paper, we present a generic Grid accounting prototype, the LCG-RUS, that realizes Grid accounting on heterogeneous Grid accounting implementations, based on OGF standards, across multiple Grid infrastructures. Detailed architecture and implementation will be illustrated as the main contribution of this paper. Experimental analysis is performed by deploying LCG-RUS upon job usage records collected at Tier-1 Grid Operational Center site of LCG.