

Realizing Inter-operability among Grids: A Case Study with GARUDA Grid and the EGEE Grid

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Recent endeavours from the global scientific and research community have resulted in realizing a massive number of customized, community oriented local and national grids. While each of these attempts has resulted in materialized frameworks that can successfully cater to a specific user community; this approach has daunted the vision of a single, unified, global, standards based Grid. Hence achieving Interoperability for the Co-existence of Grids with heterogeneous operating environments becomes the focus of today's research. This paper begins with a brief description on the need for inter-operability among world wide Grids, and further elaborates on identifying the exact requirements for achieving the same in Production environments with Functional and Operational perspectives. As a case study, specific challenges related to interoperation among the Indian GARUDA Grid and the European EGEE Grids, are discussed in detail. Possible approaches and solutions to address these specific issues at various levels are dealt at great length. The paper also tries to enumerate and draw solutions from experiences similar to this elsewhere in other global Grid projects. An attempt is made in Emergence of Global standards in this regard, to facilitate migrating with ease, across the Grids worldwide.