

Security Prototype Framework Design for Open Grid Services Architecture (OGSA)*

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ABSTRACT

Building on concepts and technologies from the Grid and Web services communities, Open Grid Services Architecture defines an uniform exposed service semantics (the Grid service). This paper gives out a brief introduction to the definition, structure and characteristics of grid. It also gives an outline of the security requirements and security infrastructure of OGSA. Based on Globus Toolkit 3.0 security infrastructure, we have designed in this paper a convenient and dynamic security prototype frameworks by the aid of pluggable module, builds the security group communication policy. It fully ensures security for OGSA, while it reduces the step of security negotiating, enhances the efficiency of interoperability between entities, improves the universal applicability, expansibility and dynamic of GSI. Using the security frameworks, a secure model for a shared virtual enterprise was constructed which provides a security platform for digital manufacture.

Keywords: Grid, OGSA, Web services, Security, Group Communication, OA.

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