

Research on Grid Security for OGSA*

Zuguang Fan, Fangmin Li, Quan Liu
School of Information Engineering, Wuhan University of Technology
Wuhan 430070, China

Email: lifangmin@mail.whut.edu.cn, fzg007294@sohu.com, qliu@pubilc.wh.hb.cn

Tel: 13973255023, 13545068921, 13908659571

ABSTRACT

Grid computing is concerned with the sharing and coordinated use of diverse resource in distributed “ virtual organization.” The dynamic and multi-institutional nature of VOs (virtual organizations) presents challenging security issues that need new security-enabled schemes. In this paper ,we make a brief discussion about Security Architecture within OGSA(Open Grid Service Architecture) , we then describe in detail approaches developed to support the GT3 implementation of the Open Grid Services Architecture, a new initiative aimed at recasting key Grid concepts within a service-oriented framework., and mainly analyze the GT3 grid security infrastructure both from the point of the resource and the user to illustrate the concrete security implementation based on Web services security mechanisms for credential exchange and other purposes.

Keywords: Grid, OGSA, Web services, GT3 (globus toolkit 3), GSI, VOs (virtual organizations)