PROPOSAL ON RESEARCH

*Topic:*

**Security Testing For Operating System And Its System Calls**

*Anatomy Of Research Proposal:*

It is very difficult but quite important to test the security of an operating system, some essential problems about security testing of an operating system are discussed, including conception and extension of security testing, feasibility and technical scheme for automated security testing

of an operating system, security of system calls, testing sequence for system

calls, and etc.

*Description:*

A prototype system (i.e. a series of testing tools) for automated security testing of system calls is designed and implemented based on Fedora 9 and Linux kernel 2.6.25-14.fc9.i686, which is made up of control module, objects setup module, standard test module, special test module and test configuration database for each system call. Furthermore, test cases as well as test results for systems calls such as creat, access and etc are discussed and analyzed. Finally, the research work in this paper is summarized while further research directions are pointed out.

*Paper Authentications:*

The paper on which we are trying to research and trying to recommend our suggestions and ideas are actually written by Gaoshou Zhai, Hanhui Niu, Na Yang, Minli Tian and some other senior information technology researchers from School Of Computer And Information Technology “Beijing Jiaotong University ”.

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