

Abstract Title: Bringing FOSS to Enterprise Computing Systems - The Kualu Project

Author: Andrew Austin, Illinois State University

Contact: ajausti@ilstu.edu; 309-531-0747

We intend to discover and document common difficulties when implementing Free and Open Source (FOSS) applications in the enterprise environment and to create methodologies to facilitate FOSS application integration with existing enterprise infrastructure. We propose that making this information available to enterprise system administrators and open source software developers will increase the 'out of the box' compatibility of FOSS applications and will ease the system administrator's task of integrating FOSS applications into the larger computing infrastructure. We are currently in the first year of our multi-year endeavor; this presentation will focus on our progress during the first phase of our work.

Our initial pilot work has been directed toward porting the Kualu application suite, an open source financial accounting package for academic institutions, to the enterprise computing environment (specifically the IBM z890 mainframe). The suite is primarily JSP-based and is targeted for the MySQL DBMS and the Apache Tomcat engine. IBM, Novell and rSmart (the Kualu development group) have expressed their willingness in assisting us with our project; we intend to capitalize on their expertise by collaborating with each of these groups to adapt the Kualu suite to utilize IBM's DB2 DBMS and WebSphere Application Server (WAS).

Our first task consisted of environmental configuration of the target platform and basic research into the Kualu suite itself. We have successfully installed the Kualu suite on the x86 architecture running Novell's openSUSE operating system and have partitioned and initialized the z890 platform (including the installation of the target Linux guests under z/VM). The second task is to install the suite onto the x390 platform running Novell's SUSE Linux Enterprise Server (SLES) as a guest of z/VM. Our third phase of work will be in depth analysis of the Kualu suites implementation of database connectivity and overall design. We will then collaborate with IBM, Novell and the Kualu development team to create additional modules for the suite to utilize DB2 and WAS.

This presentation will focus on the environmental configuration work we have done, including the current configuration of our z890 development platform and it's supporting infrastructure. We will then discuss the steps taken to install the Kualu application on the x86 architecture, our work toward implementing the application on the x390 architecture and the possibilities for our future work.

After the completion of the Kualu application's port to the x390 architecture, our second phase will begin with porting other open source applications to the x390 architecture. We hope to show that open source developers can employ our methodologies to allow open source applications to run successfully in the enterprise computing environment without advanced training or excessive modifications to their applications.