

Creating and Sharing Fedora Installation Package for Ubuntu

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Open repositories are enterprise information systems that face ongoing challenges of maintaining low operating costs, high efficiency, and high reliability. This poster proposal presents an open source strategy to help address some of these challenges. The NSF funded NSDL Materials Digital Library Pathway (MatDL) offers a Fedora-based open repository and is moving toward using the Ubuntu distribution of Linux on all of its servers to capitalize on the advantages of Ubuntu. However, currently there is no easy way to implement Ubuntu with Fedora-based repositories. This poster describes MatDL's efforts to co-develop and host a Fedora installation package for Ubuntu.

Linux (<http://www.linux.org>) has emerged in the higher education and research community as the preferred operating system for supporting Web 2.0 technologies. As part of the LAMP software stack (Linux, Apache, MySQL, and PHP) it combines with modern development technologies, such as AJAX, to support user collaboration and highly interactive sites. Ubuntu (<http://www.ubuntu.com>) has the distinction of being the most popular Linux distribution as measured by the latest Distrowatch list (<http://distrowatch.com>). Reasons for its popularity include high stability, commercial backing by Canonical Ltd, and free security updates at regular release intervals. Its Debian-derived package management system makes software installation on Ubuntu simple and easy to maintain.

Fedora (<http://www.fedora-commons.org>) is a general purpose, open-source digital object repository which offers numerous advantages in flexibility and customizability as well as opportunities for collaboration with other projects using Fedora¹. Fedora requires JAVA application stack including the Java SE Development Kit and the apache tomcat server, both of which are supported by Ubuntu. This support, coupled with Ubuntu's many other benefits including ease of maintenance, make it an advantageous choice for hosting a Fedora repository.

MatDL (<http://matdl.org>) provides stewardship for content and services needed across the material science community and in particular for its targeted audience of undergraduate and graduate students, educators, and researchers by offering a Fedora-based open repository, services, and tools to support an interactive learning experience. In moving toward Ubuntu, MatDL is co-developing a Fedora Installation Package for Ubuntu with other members of the Fedora Commons development community. This package would be available on MatDL through the Fedora Commons, helping to bring the advantages of Ubuntu to the open repository community as well as to support greater adoption of Fedora.

¹ C. Lagoze, S. Payette, E. Shin, C. Wilper, Fedora: an architecture for complex objects and their relationships *International Journal on Digital Libraries*, Volume 6, pp. 124-138 (2006)