Using DVCS Frameworks for Homogenous Systems Management

James P. Howard, II* jh@jameshoward.us

Peter M. Van Buren† petervanburen@gmail.com

Columbia-Area Linux Users Group
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Abstract

Multilayered interdependencies complicate the process of application installation, management, and removal under all modern operating systems. Numerous package management schemes have been established to smooth these complexities which are well suited to open source applications because of the ability to patch the source before building, allowing administrators to account for idiosyncratic systems.

However, the advantages of systems such as RPM can be lost when packaging monolithic commercial applications, such as MATLAB or SAS, because they require a certain type of environment on installation, including system-specific interaction. In our research IT group, we have solved this problem by managing the software applications environment directly and recording updates using Git. In effect, we treat the entire noncore OS features of out network computing environment as a large repository. This presentation outlines the issues we faced, why we selected Git, technical challenges, and some of the cultural concerns we encountered.

*James has worked at the Federal Reserve Board since 2003. Before that, he was a consultant to the Executive Office of the President and the House of Representatives. He has also implemented social media solutions to improve local governance in Columbia and Howard County, Maryland. He has a master of public administration from the University of Baltimore and graduated from the University of Maryland.

†Peter has worked at the Federal Reserve Board since 2008. Before that, he worked for MarketBridge, a marketing and sales strategy consulting firm to Fortune 500 IT companies, and Booz Allen Hamilton. He graduated from Dartmouth College.