Enabling Workspace Transference

A cross-environment framework for application and data portability

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Abstract

Workspace transference is defined as the transportation of applications and associated data between different computer environments regardless of hardware, operating systems or networks. Existing research only provides partial solutions to workspace transference. A gap still exists to unify this research under a set of requirements. Therefore there is a need for an integrated framework that binds specific requirements together to provide a complete solution. This thesis defines the concept of workspace transference and constructs a framework which provides a solution to this research problem.

A series of evaluation criteria will then be created to assess any constructed solution followed by a prototyping methodology to construct a series of prototypes to test against the workspace transference framework. Two prototype implementation cycles are described using the Perl and Python development environments. Each prototype is tested against a series of technical criteria derived from the workspace transference framework and a use case task list generated for a range of user personas. The final prototype performed all the use case tasks well and met the stringent technical criteria. This outcome indicates that a comprehensive solution to workspace transference is a feasible and practical proposition.

The workspace transference framework unifies the existing practical solutions for workspace transference and provides a technological yardstick against which future solutions can be judged.

The final version of the prototype named WorkTran meets all the requirements of the workspace transference framework. WorkTran supports three major operating systems on Windows, Macintosh OSX and several varieties of Linux, and forms a significant research outcome.

Statement of Original Authorship

The work contained in this thesis has not been previously submitted for a degree or diploma at any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Signature:

Date: