CSC 493 – SENIOR PROJECTS

Wonder Backup

Report 1 on the work of Week 1

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9/7/2010

This document contains information regarding the results of work completed on Week 1. This work includes the Project Concept Proposal and the work behind this process. Project updates can be found at http://wonderbackup.sourceforge.net.

Application Development Section

Project Concept Proposal

- **Purpose:** Wonder Backup is an open source, Python-powered, operating system independent backup solution for use in scenarios from end-users to enterprise solutions. Wonder Backup is [tentatively] licensed under the Python Software Foundation (PSF) license.
    - **Context:** The context for this program is to fill a need for a free backup solution for any user. Developed in Python, this program will be easily extensible or adjustable for any in-house enterprise solution.
    - **Goals:** This project aims to develop a Python-powered backup solution that can be used in any operating system that can run Python, including modern distributions of Linux, Windows, and Mac OS X.
    - **Audience:** The intended audience is home users, system administrators, and technical service centers. The program will be able to be controlled via a web interface, command line, or through an answer file.
    - **Functionality:** Given that the program has a number of interface options; it will be functionally usable by anyone. The availability to customize settings using an answer file allows technical users to create precompiled Linux recovery solutions. Lastly, backups can be made to any external source, whether it is an external hard drive, flash media, or Windows network shares.
    - **Milieu:**
        - BackupPC, http://backuppc.sourceforge.net/
            - This program is for enterprise solutions. It provides backing up to a central server by separate client and server installations.
            - Limitations include the inability to backup to locally available storage, and no documented support for Mac OS X.
            - Developed in C++.
        - Amanda Open Source Backup, http://amanda.zmanda.com/
            - This program is for enterprise solutions. It provides backing up to a central server by a server installation and client web interface.
            - Developed in C and Perl.
    - **Novelty:** Wonder Backup will be built in Python and will be self-contained. It requires no server installation and does not necessarily need to be run in the native Operating System being backed up.
- **Resources:**

    - Python Programming Language 2.7
        - http://www.python.org/
    - Samba Windows Interoperability Suite
        - http://www.samba.org/
- **Challenges:**
    - Python versioning on Unix systems with Python pre-installed.
    - Web Interface
    - Incremental Backups
    - Support for older operating systems
    - Multiple directory selection in different interfaces
    - Packaging software for use with Windows
- **Measures:**
    - Software properly runs on each tested Operating System.
    - Command-Line interface is functional.
    - Web interface is functional.
    - Software packages operate as desired.
- **Future Extensions:**
    - Encryption
    - Service, background backups

Inspiration

- **Motivation:** This project is important to me because I have not found an equivalent, Python-based backup solution. Python is my language of choice and I would like there to be an option to have a fully customizable and extensible backup program that is fully open source and freely available to anyone who seeks a better backup program.
- **Profession:** This project will help my professional growth through the creation of a program that has no current alternative. Filling this void in the software universe will begin to publicize my name as a serious programmer. Combined with the experience I hope to earn by approaching this project through a professional business model, this project will certainly further my professional growth.

Executive Section

To: Dr. Jan Pearce, Project Director

From: Sean Davis

Subject: Wonder Backup

Date: 9/7/2010

Accomplishments: I gathered ideas for the project. I opened the project page for Wonder Backup at http://wonderbackup.sourceforge.net. I also developed a preliminary project logo and icon. Lastly, I compiled the project proposal.

Challenges: Thinking of a project name that was yet unclaimed proved to be a difficult endeavor. Creating the project logo was a tedious process since I used imaging software that I had never encountered. I did manage to overcome both of these challenges.

Time Spent: 2 hours on logo development, 2 hours on project proposal, 10 minutes on the Executive Section.

Goals: Meet with Project Director to plan next phase.