

Introduction (Background & Motivation)

Peppermint OS is a fast Linux-based operating system which was first released in May 2010. It was designed by Shane Remington and Kendall Weaver with the objective of building a fast, efficient, and cloud-focused Linux distro which will run smoothly even on old or low-resource computers. Peppermint is based on Ubuntu/Debian but combines the stability of an old-style Linux system with cloud-focused integration.

One of its most prominent features is the ICE SSB (Site-Specific Browser), which allows users to turn web applications into desktop applications. The feature, in itself innovative, makes the product ideal for those users relying significantly on cloud resources like Google Docs, Microsoft Office Online, and other web utilities.

The purpose of employing Peppermint OS within this project is to observe and examine how a lightweight, cloud-connected Linux environment can be loaded and executed within a virtual configuration (VirtualBox). This configuration offers a means to test Linux elements such as system calls, filesystems, and performance tuning without permanently altering the host platform.

Objectives

The fundamental objective of the assignment is to gain hands-on experience with Peppermint OS by having the operating system

installed and configured within a virtual platform using software such as VirtualBox. Students, through this exercise, should have an understanding of how operating systems are deployed, filesystems managed, and the way system components interact within the Linux environment.

The specific objectives are:

- To finalize the installation of Peppermint OS as a virtual machine (VM) running Linux under VirtualBox.
- To identify the hardware and software installation requirements and to fulfill them according to the specification.
- To record the installation process according to simple-to-follow, step-by-step instructions and screenshots.
- To explore filesystem formats like ext4 and understand how they're used in Linux systems.
- To observe and debug common installation issues and provide solutions from real-world experiences.
- To lay the groundwork for future exercises such as work on system calls and shell scripting within the OS.