Secured on-the-Go™ - Flash Padlock with Portable Applications

White Paper, prepared by ClevX

1 INTRODUCTION

Portable applications allow people to carry applications and data on portable storage devices such as USB Flash Drives (UFDs) for use at home, work, school, library, Internet cafes and kiosks. The added convenience is offset by security challenges. Being tiny and highly portable, UFDs are easily lost or stolen. Thus, many are reluctant to use UFDs for storing things such as finances, user names, passwords, credit cards, and other sensitive items. To protect the UFD and its data from malicious and unauthorized access, ***user authentication*** is required.

This white paper describes Portable Applications and their inherit security drawbacks. It then describes Flash Padlock™ and, how when integrated with open source portable applications, it creates a productive, portable *and* secure solution.

1. ***Flash Padlock*** [1] USB drive – is a *host-independent* storage device with a *self-contained authentication mechanism*. Flash Padlocks use a PIN to unlock your personal information.
2. ***PortableApps.com suite*** – is a suite of software applications that do not require computer installation. They are ready to run as soon as the UFD is connected to its host allowing users to run their favorite applications, complete with all their documents, bookmarks, settings, email and more, on any computer – all without leaving any traces behind.

[1] PadLocks are developed and produced by Corsair Memory (www.corsairmemory.com) based on licensed technology (*patents pending*) from ClevX, LLC (www.clevx.com)

2 THE PORTABLE ALTERNATIVE

Traditionally, using a software application on multiple computers (e.g. at home, at work) required users to install the application on each one. In most cases, licensing and administrative restrictions prevented this as a practical option: installations may be restricted to a single computer or the user did not have administrative rights to perform the install (e.g. work or public venues).

Another approach, a growing number of services let users store personal data on web servers and access it from anywhere using a browser and server resident software applications. Known collectively as Web 2.0, users can access their email at such places as Gmail and Yahoo, digital photos at Snapfish or Flicker, videos at YouTube and social interactions at FaceBook or MySpace.

But many people are not entirely convinced of the reliability, accessibility, privacy, and security of Web-based online storage and software. Indeed, a browser and an Internet connection is all that is needed, but this comes at the cost of being dependent on reliable and speedy web access, their availability, and their willingness to provide continued service. Many people simply don't trust a third party service to keep their personal, professional, and confidential content.

Using a browser on a public computer is anything but safe. A browser leaves behind a wealth of information including cookies and history that are not erased when logged out.

Fortunately, a new alternative is gaining momentum. A portable application is an application that does not require installation, in the traditional sense, and can be carried on portable storage media (UFD, MP3 player, etc.). For example, a UFD can contain a portable email application that has your contacts and past emails. Since everything is contained within the UFD, a person is able to use any computer to send and receive emails just as if they were at home. In addition, no traces are left behind when disconnected.

Portable Applications attain reliability and performance levels that match "installed" applications with the additional benefit of portability:

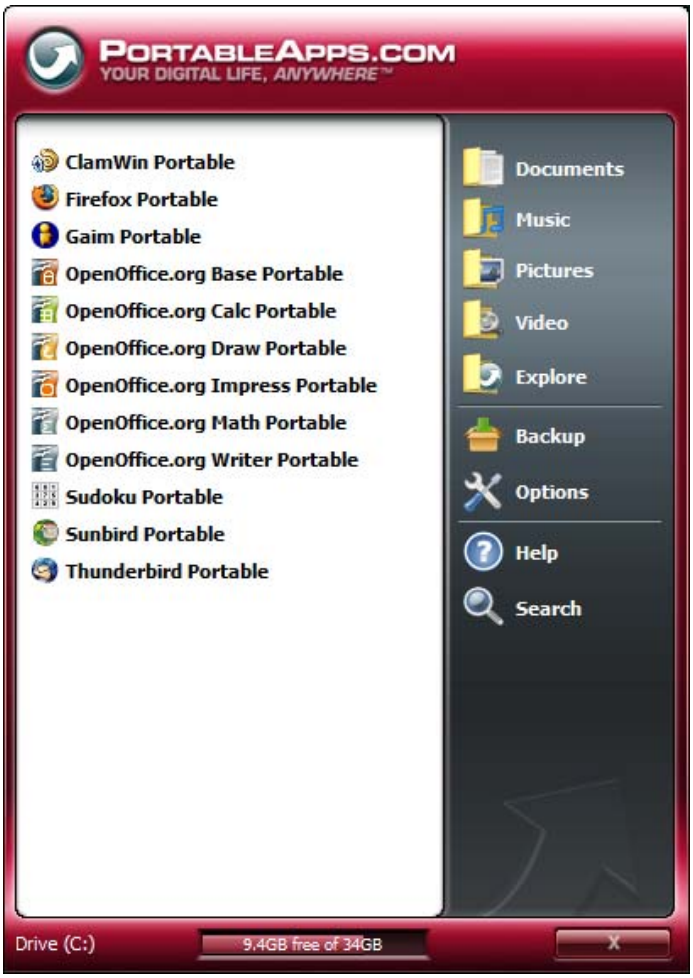
- Applications can be used on any computer without installation (no administrative rights or computer “ownership” is required).
- No traces of personal and confidential information are left behind.
- Content is kept on user's portable device and is always under their possession and control.
- Content and applications are carried together. There no need to copy or synchronize content on each computer used.
- Disaster recovery (hard drive crash, theft, or upgrade) are a snap. Simply connect the UFD to another computer. You're ready to continue work.

3 THE PORTABLEAPPS.COM SUITE

PortableApps.com (PA) is a suite of open source software that has been specially adapted to run quickly and smoothly from a USB drive on any Windows computer. A Launchpad is at the heart of the PA suite that appears in Windows system tray. Users are able to invoke applications, browse, search, backup and restore. The standard PA suite takes 89.5 MB and can be downloaded from http://portableapps.com/suite. Some of its more popular applications are:

- **Mozilla Firefox.** Using the popular Web browser users can take with them bookmarks, extensions and saved passwords.
- **Mozilla Thunderbird.** The email client allows users to take with them their email, address book and account setting. They can also add GPG and Enigmail to encrypt and sign emails while keeping all credentials on the drive.

- **Mozilla Sunbird.** The handy calendar allowing user to take their schedule and to-do list with them.
- **OpenOffice.org.** A complete office suite, including word processor, spreadsheet, presentation tool, drawing package and database. Users can take all documents and everything needed to work with them wherever they go.
- **Pidgin.** A versatile instant messaging client so users can take their IM settings and buddy lists with them



Many other applications are available. A full list can be found at http://portableapps.com/apps.

Portable Skype is also available. This popular application allows one to make free (or almost free) calls using any Internet-connected computer. Users can carry their contact list, chat history, file downloads, speed dial and settings. Portable Skype is not currently an official part of the PortableApps suite. However, the PortableApps support forum provides clear instruction on how to integrate Skype with the Launchpad.

4 Flash Padlock - The Perfect Media for Portable Applications

UFDs can be lost or stolen. Thus, people should be concerned about using them to store confidential documents, financial data, user names, passwords, credit card data, and other information as it may end up in the wrong hands.

Fortunately, there are a number of secure UFDs on the market that can be used as a security companion for portable applications. In this paper, our attention will be directed at the Flash Padlock from Corsair Memory (http://www.corsair.com/products/padlock.aspx):

Flash PadLock is a *platform independent* USB Flash Drive with a *self-contained authentication mechanism*. When locked, a PadLock is invisible to its host; when unlocked, it acts as a standard USB Flash drive. It is the perfect media for portable applications as **it provides a unified authentication mechanism for *all* portable applications contained within.** A single PIN is used to access them all and sensitive information remains locked when the device is unattended, lost, or stolen. Users can securely carry their bookmarks, passwords, and documents along with their associated applications.

The correct PIN unlocks PadLock allowing it to be accessed from the host computer. A PIN can consist of up to 10 digits and is not stored in a manner such that it can be hacked. The drive will automatically lock itself when unplugged or the host shuts down.

PadLock drives represent both usability *and* privacy.

- **Ease of Use.** An easy to remember PIN is used as opposed to a long and complex password and there is no need for complex partitioning and configuration.
- **True Host and Operating System Independence.** It works equally well with all operating systems that support the USB Mass Storage Class. In other words, it works with Windows, Mac OS, Linux, and even office equipment.
- **Authentication is self-contained.** No software installation is required making it the perfect companion for PortableApps. The host computer is unaware of the authentication process. PadLock provides complete PIN management.
- **Immune to host-originated attacks.** A locked PadLock provides no communication channel to its host making it immune to host originated hacking attempts.

5 CONCLUSIONS

Portable applications are a great companion for portable storage. The combination creates a traveling work station without the computer. As such, one needs a means of securing and locking down confidential information.

Flash Padlocks a self-secured and cross platform USB Flash drive with a built-in authentication mechanism that can be applied to all portable applications contained within. It provides the optimal balance between usability, security, and price.

All your applications and data become automatically secured.