

Make your digital life portable (Usage of portable applications in our everyday life and in the army)

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Abstract

Satisfaction that IT and the user need can be provided by a software, that does not require excessive competence and yet we can use all of its functionality along its complexity. The PortableApps platform offers the opportunity to use programs alternatively while providing a platform free of charge. Due to its portability, rich services, up-to-date functionality and ease of use, it is the most ideal choice for everyday use.

The purpose of this article is to provide a broad introduction about the capabilities of the portable applications, PortableApps.com platform. In addition to this to compare them with traditional applications in order to increase its popularity among everyday PC users.

Keywords: portable applications, easy handling, Smart Defence, effectiveness, PortableApps platform,

Introduction

Nowadays, people use variety of computer software to facilitate countless tasks. There are some of these, which occur very often, practically on every computer. Who would not use a browser program in the complex world of the Internet, or who does not need an office suite? But we can also see that it is not really a particular software, but a function provided by a software group.

Based on an article of the CERN's IT department [1], six general functions appear:

- E-mail client
- Web browser
- Office software
- PDF Handler
- image editor
- antivirus

However, if you think outside of the general user's vision, plenty of features will appear such as developer environments, remote access, multimedia applications, various security software, and specialized software tools.

There are numerous free and commercial software that are designed for different platforms to implement these features. However, there are free softwares for almost any operating system to accomplish a single function. Although these have their own disadvantages, it is worth examining their usability.

A newly purchased computer is usually delivered with a pre-installed Windows operating system. If you want to use each application in the system in a legitimate, unfounded state, you can do it with either significant cost or with the usage of open source softwares. Using illegally acquired(pirated) software - though it is widespread and typically unchecked - violates copyrights and implies criminal liability [2].

It is typical of an average user's IT practice that they do not use each and every feature of a certain software. The commonly used abilities can be found both in free and commercial softwares. Examples include Microsoft Word and LibreOffice Writer. Both are full-featured word processing applications with nearly the same capabilities [3] and with the difference that LibreOffice's product is freely available.

However, due to the many features, commercial software takes considerably more space on the mass storage. Take the most popular image editing application, for instance. Photoshop needs storage space of about 2.3 GBytes, while the different versions of GIMP range around 250 MBytes.

An even more serious problem is the harshness of license contracts. If only one installation is allowed with the purchased license, you can only use the program on a single machine. New purchases are required for additional copies.

The project, document or presentation made will obviously be displayed in the user's official environment. If the format is not supported by a given system, prior to the technical "juggling" before the presentation, the creator may become a subject to a disadvantageous judgment.

You may also come across that a user does not want or can not take his/her computer with him/her. The computer may have an internal failure, which can embitter the owner's life.

The problems listed above can be solved by a very promising idea and a constantly evolving environment, the PortableApps platform. This solution allows us to bring all important features, applications and settings virtually on any PC running Windows or Linux operating system. As a result our computer will always look and work like ours. In addition to this it will always consist our settings and applications as well. This great mobility and freedom will be explained in a more detailed way in this paper.

The PortableApps platform

There are two main recognizances of portable applications by definition. First, they can be moved easily across different computing environments, so they do not need installation. Second, after closing the app, nearly no trace is left behind on the host, because the configuration, files, and data are all stored in the applications folder. Thanks to these aspects, portable applications can run independently from the host operating system. This kind of software can be obtained, installed and managed by the PortableApps platform.

Why is it hard to find and download apps that you like and then place them on a pendrive? The searching and maintaining procedure of the software will cost a lot of work, and we might not get what we expected. Someone had already gone through these problems and realized that there is an easier method. That is what the platform does: it makes things easy for us. What we need: a thumb drive or a cloud-based storage, a stable Internet

connection, and a computer running Windows. As a first step, we need to get the platform setup from the official website and then install it on a media we have chosen. During installation, you can select which applications you want to place on the storage and then let the platform do its work. The waiting time depends on the speed of the Internet connection and the total size and number of programs selected. After the installation is completed, we can use the applications. However, if you want to store the apps in the cloud, there is one step to be made. We need to synchronise the installed folder to the cloud, and also to all applicable computers. (For differences in the usb drive and in the cloud, see Chapter 3)

The platform has four major positive features. First, unlike many other similar platforms, when installing the PortableApps platform, only the selected and necessary softwares are installed.. Secondly, all the settings and configurations associated with these softwares are located in a folder. Each application has its own one, that remains same on every computer. These configurations are not compromised by software updates either. Third, the platform has its own update system. The built-in updater automatically searches for new versions and warns you. Downloads and installs are only done with the permission of the user. Fourthly, menu system is provided, which is similar to the windows start menu. Along with number of useful features such as search engine, appearance settings, and other platform-related tools.

In addition to the previous statements, there are a plenty of additional benefits. The main source is its own online software center. Only verified, unmodified software is added to the control panel, and the organization claims that the applications they provide that are completely safe. The source code for applications is downloaded in a compressed form, with all of its benefits. In the case of license agreements, the organization undertakes to ensure that all software provided by them is open source and free.

By comparing platform solutions with stand-alone search and installing, we can clearly see that the benefits of this platform is indisputable. The main threat to portable applications are the ones, which are produced by individuals, owing to the fact, that most of them are from uncertain source. It may happen that the creator of a certain portable app wants to abuse the goodwill of a user by a hidden modification in the code. An unsuspecting user can install malicious software on the workstation without unintentionally. The platform, however, with its internal security mechanism prevents the corruption of its software, so they can be obtained in their original form. Another security feature is the searching mechanism of the platform which updates the latest version of the application. It can fill the security holes, so the vulnerabilities can be fixed almost instantly. In addition, the security of our software is also guaranteed in a way that the platform automatically detects unwanted changes after the installation on the pendrive. It can detect even the changes in the Autorun file and instantly alert the user. Finally, the platform's software archive contains an encryption program called VeraCrypt. Using this, you can create an encrypted volume in the root folder of the pendrive, and the documents created by the applications can all be placed in this encrypted container, carefully locked away from curious eyes.

Overall, PortableApps platform uses most of the benefits of portable applications and with all its tools it creates an easy handling environment for the users. Despite its extraordinary lightness and affordability, it provides the user with a sufficiently secured environment. These features make the platform even applicable in military environments.

Do it yourself

We can create Portable applications for ourselves. Regardless of the manufacturer and the size of the software, there is a specific application, which enables us to create our own portable app. With Cameyo (which also does not need installation), we can run our favorite software even through a browser. However, its most significant function is the traditional-to-portable conversion.

Using it does not require any special IT skill, only basic knowledge of virtual computers, because the conversion has to be done on an intact virtual machine. After launching Cameyo, select "Capture the installation" and then install the selected software after start of the recording. When the installation is completed, it will stop recording. The portable program we just made is stored in the user folder \ Documents \ Cameyo folder. The program's key aspect is that it is portable as well as freeware, thus it can be used freely. Due to its easy handling, it does not require a great deal of expertise. The only disadvantage is the high time requirement. We have to wait a lot to start recording and to create the portable application itself. The time also largely depends on the size of the chosen software.

Comparison of different media

The PortableApps.com platform can now be installed on two media, cloud and pendrive. (There is a possibility of installing directly on the computer, but this is irrelevant for the article.) Both solutions have their own advantages and disadvantages that make them justified in a different application area.

The cloud-based solution is a more convenient choice, since since with a few extra hours can get an office available from anywhere without a separate device. The most effective use of cloud based solutions can be an office environment. It is important to note that the cloud requires a stable Internet connection and the initial synchronization with the cloud takes some time. This is not a problem in an office, since it only needs to be done once, and the sync (because of the fast and stable connections) only takes a couple of minutes. Thus, technically, the user's office and home computer becomes one. They run the same applications, the same files will be found on both, and their synchronization is almost unnoticed.

The main benefits also come from this synchron. On one hand, since synchronization is done through the network, there is no need for intermediate hardware, so there is virtually nothing that the user can lose. On the other hand, storage of data in the cloud virtually eliminates the possibility of data loss due to hardware failure.

However, the main disadvantage of the platform is because of this technology. Using the cloud, we give away the complete control over our data, and a third party can get to know their content. For this reason, this solution becomes unsuitable for military use.

Another solution is to use a removable media. They offer much more mobility, and really do what the platform is about: making any computer work just like our own.

Its high mobility is due to the fact that the synchronization needed for the cloud is practically done by connecting the pendrive. However, a media with this mobility can still be considerably secure. This primarily comes from the fact that our data is not exposed for a single moment and is not transmitted over an open network. An additional security solution is done by the platform itself. It takes control of the storage, and regularly checks for unwanted modification. For more security, we can take further steps with the encryption application already discussed, VeraCrypt portable

Pendrive is useful for users who often move locally or between computers, but still need the security of their data. This solution speeds up the initialization process. The user sits down at a new computer, connects the usb key and runs the .exe file, and then he can use the apps instantly. there is no need to install your cloud service client or long synchronization. Thinking further, we will get to a new, fundamental aspect of mobility..

Blocking installations on a Windows operating systems is a very quick action, and it is often used by system administrators to prohibit unauthorized software installation. In addition, it is almost certain that we do not get administrative rights, so we can not run certain types of software. However, portable applications need no installation and are typically run without modifying the computer, so they do not require special privileges. Again, you can save a lot of dead time. You do not have to wait for the system administrator to purchase and install the necessary program, as it is already a part of our mobile office.

Financial Approach

So far, we have seen in many areas that portable applications served by the PortableApps platform have the potential to replace their professional counterparts. They all support the core functions and are able to meet the needs of daily work, and they can be used in the current environment. However, we can assume two main areas, due to which software companies stayed in business.

Well-built marketing has provided a major benefit, for example, to Microsoft products[5]. Among other reasons, their products stayed at the top, because companies got used to the well-tried software they always used, Microsoft did not make huge blunders, and based on the good feedback, other market operators also chose their software.

The other area that faces shortcomings is the lack of extensive infrastructure. Large software companies have departments to provide support at any given time to their customers. They have enough resources to better their applications to the entire perfection (based on their view). In contrast, free software development teams work with smaller numbers, meaning they do not have the opportunity to excel in every area. For example, most GNU software only have user forums to provide support, but immediate help is usually not available.

On parameters like these the given company's business policy should make decisions. However, it is worth examining the financial implications of the two approaches, the paid and the free software.

As examples, two of the six core office functions discussed in Chapter 1 were examined (e-mail clients, office suites). Anti-virus programs should be chosen based on security considerations, so I do not discuss them in this article.

The e-mail client is considered free in both methods. Thunderbird provided by PortableApps is a good alternative to MS Outlook, which is, however, included with most business-purpose Office packages. Bought as standalone software, Outlook costs approximately 15,000 HUF (roughly \$55) per year per user.

There are higher differences between office software packages. PortableApps applications include OpenOffice and LibreOffice packages, of course, free of charge. An example of a professional office suite is MS Office, with different versions available at varying prices. The most basic small business package would cost approximately 30000 HUF (approximately \$110) per user annually.

Similar analogy applies to almost every single function. Consider the applications used day by day. In many cases free software could easily substitute the professional ones. Using PortableApps means basically no cost, and even with complete protection -the Carbide- our expenses would not exceed 25000 HUF. It's worth

considering whether we really require the rich functionality of paid software, or it would be better to create a free, lightweight, mobile environment that can be used at any time and almost any computer.

Portable applications in military environment

The basis for the operation of an organization is the effectiveness of the work of its employees. In peacetime, office workers in military organizations face with numerous administrative tasks during their duties. PortableApps provides access to open source alternatives of paid and expensive software. We can use it as a webbrowser (Chrome, Mozilla), document manager (OpenOffice, Libre Office), e-mail client (Thunderbird), and also it provides software, that can make our PC more secure (VeraCrypt Portable, Password Gorilla Portable). Using the PortableApps platform, we can prevent cases, where for instance a certain user tries to download a freeware from an unreliable source and thus his/her appliance becomes infected. The PortableApps platform is also compatible with other operating systems. We can utilize low-resource software, which is mostly used in office environment with a help of an utility called Wine on Linux interface. Its main positive aspect lies in its free usage. In a military organizations, the preparation of paperwork is largely accomplished electronically. In order to do this, there is no need for expensive office software packages, since we can produce the same quality work with PortableApps office software.

The effectiveness of work in the operational areas lies in the good use of time and the combination of mobility. The most convenient and easy-to-carry programs that are available at any time are the most suitable choice for eliminating the dead time triggered by hesitation. A new dimension could be the conversion of software used by soldiers in operational areas to portable apps, in order to ensure the effectiveness and performance of the work. For some reason (whether it is an unexpected blow or a technical error), we can transplant our work almost instantly to another computer with a help of a data carrier which enables us to use the certain software without installation. This is not part of the portable apps platform, it's just a new dimension that combines DIY apps and the military usage of them.

Conclusion

In this article, we have pointed out that portable applications in many cases prove to be more useful than their conventional counterparts. For users, who travel a lot, or change their computers frequently, it would be significantly better to have a "mobile office" created from portable applications.

The other goal of the study was to demonstrate the benefits of the PortableApps.com platform that make it particularly suitable for the implementation of the previously mentioned "mobile office". We've demonstrated how a Carbid pendrive with PortableApps can help users who want their "office" and the data created to be safe even with great mobility.

However, we must state that in certain situations we can not rely solely on free and portable programs. There



are features and activities that can only be done using traditionally licensed software. We may not deny the use of such software.

On the level of an individual user, the “portable office” provided by the PortableApps platform deserves much greater attention than it currently has. Also, organizations should think over their potential and opportunities and, if justified, they should consider the use of portable applications as a custom application or within the platform.

The same idea can be applied to the army as well. According to the NATO SmartDefence's idea^[6] about harmonizing requirements, it would be advisable to analyze the requirements of individual roles, as well as the positions of public employees, to provide them software based on their actual needs.

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