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Report Title:Windows vs. Linux Operating System

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1. Introduction

1.1 Operating system

An operating system (OS) is system software that manages computer hardware, software resources, and provides common services for computer programs. Time-sharing operating systems schedule tasks for efficient use of the system and may also include accounting software for cost allocation of processor time, mass storage, printing, and other resources.

1.2. Windows Operating system

Microsoft Windows, commonly referred to as Windows, is a group of several proprietary graphical operating system families, all of which are developed and marketed by Microsoft. Each family caters to a certain sector of the computing industry. The first version of Windows OS is released in 1985 which is a simple GUI. Most of the PC are currently running on the Windows operating system only. The latest Windows OS version is Windows 10 which is currently ruling the market.

1.3. Linux Operating System

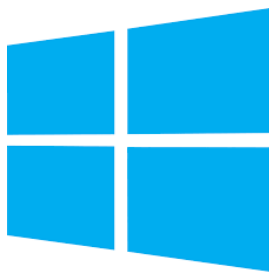
Linux is a family of open source Unix-like operating systems based on the Linux kernel, an operating system kernel first released on September 17, 1991, by Linus Torvalds. Linux is typically packaged in a Linux distribution. Distributions include the Linux kernel and supporting system software and libraries, many of which are provided by the GNU Project. Many Linux distributions use the word "Linux" in their name, but the Free Software Foundation uses the name GNU/Linux to emphasize the importance of GNU software, causing some controversy.

2. Difference Between Two Operating System

2.1. Logo

There are different logo for each operating system.

Windows:



Linux:



2.2. Full Access vs. No Access

Having access to the source code is probably the single most significant difference between Linux and Windows. The fact that Linux belongs to the GNU Public License ensures that users (of all sorts) can access (and alter) the code to the very kernel that serves as the foundation of the Linux operating

system. You want to peer at the Windows code? Good luck. Unless you are a member of a very select group, you will never lay eyes on code making up the Windows operating system.

2.3. Licensing Freedom Vs. Licensing Restrictions

Along with access comes the difference between the licenses. I'm sure that every IT professional could go on and on about licensing of PC software. But let's just look at the key aspect of the licenses. With a Linux GPL-licensed operating system, you are free to modify that software and use and even republish or sell it. Also, with the GPL, you can download a single copy of a Linux distribution and install it on as many machines as you like. With the Microsoft license, you can do none of the above. You are bound to the number of licenses you purchase, so if you purchase 10 licenses, you can legally install that operating system on only 10 machines.

2.4. Command Line Vs. No Command Line

No matter how far the Linux operating system has come and how amazing the desktop environment becomes, the command line will always be an invaluable tool for administration purposes. You could use a Linux machine for years and never touch the command line. Same with Windows. You can still use the command line with Windows, but not nearly to the extent as with Linux. And Microsoft tends to obfuscate the command prompt from users.

Without going to Run and entering cmd (or command, or whichever it is these days), the user won't even know the command-line tool exists.

2.5. Ease of Installation

In Linux, most distributions intended for new or intermediate users provide simple graphical installers. On Windows Server 2003 and prior, the installation is divided into two stages; the first, text-mode; the second, graphical. On Windows Vista and newer, the installation is single stage and graphical.

2.6. Device drivers

Linux kernels in most distributions include the majority of drivers available as modules. They are loaded at boot without user interaction. Most drivers are included in the kernel source tree, however there are several manufacturers which distribute proprietary drivers. The Windows installation media usually contains enough drivers to make the operating functional. To this end, "generic" drivers may be used to provide basic functionality.

2.7. Malware

More than 800 pieces of Linux malware had been discovered. Some malware has propagated through the Internet. However, in practice, reports of bonafide malware presence on Linux based systems are extremely rare. Nonetheless, anti-malware tools such as ClamAV and Panda Security's Desktop Secure for Linux do exist. Once malicious software is present on a Windows-based system, it can sometimes be incredibly difficult to locate and remove.

2.8. User Account

In Linux, Users typically run as limited accounts, having created both administrator (named "root") and at least one user account during installation. In Windows Vista, all logged-in sessions (even for those of "administrator" users) run with standard user permissions, preventing malicious programs (and inexperienced users) from gaining total control of the system.

3. Conclusion

In many ways, Linux beats its competitor, Microsoft. The open-source solutions are known for their stability, security and speed. However, to benefit from these advantages, you have to take a closer look at the operating system. Getting started is not particularly easy with any of the current Linux distributions. To get the system set up perfectly, you will need to acquire quite a bit of knowledge and really get to grips with its subtleties. Without this, you won't have much luck with Linux.

In contrast, Windows is designed to operate out of the box, and it achieves this somewhat better than its reputation might lead you to believe. In recent years, Microsoft has made significant improvements to its operating system. Users looking for a functional system, which does not require extensive configuration, are especially likely to be satisfied with Windows. Its ease of use combined with extensive compatibility makes Windows a good choice for most users.

