

Some beneficial features of the unix operating system



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Some Beneficial Features of the UNIX Operating System CIS 155 Some

Beneficial Features of the UNIX Operating System Safety issues have always been one of the major aspects of effective operation of human beings and systems invented and implemented by individuals all over the world in different periods of human history. The rise of the personal computer in the market is another potential threat; nowadays this threat comes from the internet through computers and other devices.

As stated in the study by Garfinkel, Spafford, and Schwartz (2011), “ in today’s world of international networks and electronic commerce, every computer system is a potential target” (p. 3). Computers and servers store information that can be damaged or retrieved by hackers that are not interested in keeping the operating system safe and sound. As such, the UNIX operating system can be considered one of the safest for your network activities with a minimum threat to your operating system and the computer in general. Benefits of the UNIX Operating System

There are many benefits of the UNIX operating system when viewed independently or in comparison with other operating systems. It is natural that UNIX has supporters and those who oppose the use and benefits of this OS. Nevertheless, everything depends on the purposes for which the operating system is installed and the activities for which it operates. In other words, the scope of commands makes UNIX one of the cheapest and compatible operating systems on the market (Afzal, 2008). With the option of being installed on any type of hardware regardless of the brand and price, UNIX is a viable option for any information technology professional.

In addition, it is important to mention that UNIX became the basis for other operating systems generally referred to as the UNIX-like ones as they use UNIX codes and are rather competitive compared to non-UNIX-like systems (Afzal, 2008). **Simplicity and Origins** The UNIX operating system became one of the first attempts of the information technology age to make the computer popular among average users. The contribution was made in the form of this beneficial operating system that helps people all over the world get access to the internet and surf the web for hours without being under threat of getting a virus or damage to software.

It is simple and user-friendly compared to other operating systems. One of the examples of simplicity in UNIX is the Simple Mail Transfer Protocol (SMTP), “ an Internet standard for transferring electronic mail between computers [implemented by UNIX] with programs or systems called Message Transfer Agents” (Garfinkel, Spafford, and Schwartz, 2011, p. 347). The overall simplicity of the UNIX operating system can be traced in all its utility programs and other supportive agents that help the system to operate effectively without application of complicated schemes and codes.

In other words, the simplicity of the system makes it attractive for programmers and people working with codes and programs to be written (Afzal, 2008). So, simplicity, toolbox, democratic approach, flexibility and stability, as well as virtual memory and cheap hardware are the basis for making this operating system an attractive solution for people that need a good and reliable OS for their personal or professional purposes. **Open Standards and Portability** The open standards and cross-platform portability

of the UNIX operating system is another great beneficial feature of this operating system.

As stated in the study by Liu, Yue, and Guo (2011), “ since most of the networking protocols were initially implemented on UNIX and most of the Internet services are provided by server processes running on the UNIX operating system, UNIX has a fundamental and profound influence on computer networking” (p. 316). The impact of UNIX on the development of other operating systems and the overall progress of information technology so far has been undeniable. However, it is necessary to emphasize the applicability of this operating system to a small number of computers due to the users’ preferences.

Different types of machines can be considered valid for the UNIX operating system, because it is treated as highly portable. Various computing machines can host UNIX, which would be only advantageous for them. The UNIX operating system was not coined for the expensive machines with the hardware changing every six months or less and upgrades available for even higher prices. Its flexibility and cross-platform portability make it an integral part of the democratic approach used by the creators of the operating system. Main-frame and micro-computers can benefit from the UNIX operating system and all its features (Afzal, 2008).

Stability of the operating system is another beneficial feature that can be treated as a competitive advantage compared to other systems, such as Windows, with regard to maintenance and related procedures. Security features as well as processing power can also be treated as beneficial features of the UNIX operating system, especially when compared to other

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operating systems. Prerequisite software is something pertaining to all operating systems except the UNIX operating system, because it does not require additional upgrades in terms of hardware and software being absolutely cheap in maintenance and administration (Afzal, 2008).

Besides, users can use UNIX on the cheapest and simplest hardware regardless of the brand. Most effective operating systems operate on the codes designed and introduced to the market by AT&T that created UNIX and contributed positively to the development of personal computers. The UNIX operating system is aimed at solving problems in the field of information technology: It uses simple tools, agents, and codes that are free of charge and helps the users operate effectively and safely on this basis (Afzal, 2008).

Application programs compared to the simple tools by UNIX are too complicated to be beneficial for users and the overall effective performance of the system. The memory of the UNIX system is protected and considered to be as secure as the overall operating system and the number of programs that can be launched with no threat or compromise to other running programs in the same instance (Afzal, 2008). The benefits of the virtual memory should be described in another section, whereas it is necessary to mention that UNIX security, customization, and controls options make users select this operating program out of dozens of other existing ones.

Open standards enable the UNIX operating system to share its codes and achievements with the users and other developers. As stated in the study by Raymond (2004), “ Unix is still the only operating system that can present a consistent, documented application programming interface (API) across a heterogeneous mix of computers, vendors, and special-purpose hardware”
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(p. 8). Moreover, no other operating system can compare to its applicability and open standards as well as its cross-platform portability.

Along with all other advantages of this OS, open standards attract more users that can value the portability of UNIX and its simplicity. Virtual Memory, Toolbox, and Customization The benefits of the UNIX operating system are numerous with the virtual memory and customization options as well as the authorization procedures and the general security of it all. So, the virtual memory of the UNIX operating system is on the high level: Low or medium levels of physical memory cannot compromise the virtual memory of the operating system (Afzal, 2008).

So, users can launch many programs at once with no threat to the performance of the UNIX OS. The resources of the system are capable of running many programs being active which will not make the work of the entire system less effective. In other words, more complicated and proficient tasks can be performed with the help of other commands and utility programs combined in the framework of UNIX (Afzal, 2008). Files are unified to make the operation of UNIX more efficient in terms of times needed to respond to commands and costs necessary to upgrade the overall system.

As such, all types of data and devices are identified by UNIX as files, making it better and more appropriate for different purposes. Access to the computer is reached only via application of valid passwords and keys that are aimed at making UNIX rather protected and security-based (Afzal, 2008). Authentication is another tool that helps the system to operate effectively. Accounts and their owners are subject to the owner of the personal computer

with the UNIX operating system to decide whether he or she wants anyone else to use the computer or not.

The toolbox is designed in a way that makes the operations fast and efficient. Utility programs and commands are used to perform specific tasks; so, they are created for very particular purposes. This approach is contrasted to the one when commands and utilities serve for a variety of complicated tasks rather than simple ones. In other words, the UNIX operating system can be referred to as a box with all necessary tools that carry out their tasks in a corresponding manner (Afzal, 2008). Customization enables the users to adjust the system to their needs and purposes without being designed for particular settings and menus.

As such, a user owning the UNIX operating system can change the options and settings unlike the user of other operating systems with pre-configured settings. Overall, the UNIX operating system is used all over the world due to the approach selected by its developers: they made it a free-access tool that can be used by any individual that has a personal computer and needs an operating system. Main-frame computers and mini-models of personal PCs can operate on UNIX without visible or invisible threats to their effectiveness. It can be used on different platforms regardless of their origin and compatibility.

UNIX is a well-documented system with everything stocked within that a user would need. References Afzal, A. (2008). CIS155: UNIX Operating System: Custom edition (5th ed.). Upper Saddle River, NJ: Prentice Hall/Pearson Custom Publishing. Garfinkel, S. , Spafford, G. , & Schwartz, A. (2011). Practical UNIX and internet security (3rd ed.). Sebastopol, CA: O'Reilly <https://assignbuster.com/some-beneficial-features-of-the-unix-operating-system/>

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