

# Operating systems essay sample



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Operating systems is defined as the software program that enables the computer hardware to communicate and operate with computer software. Without it, a computer would be useless (Operating system ABCs, n. d.). Operating systems (OS) can also be classified as multi-user, multitasking, multiprocessing, and multithreading. A multi-user OS allows two or more users to use the computer at the same time or at different times. Some examples are Linux, UNIX, and Windows 2000. On the other hand, a multitasking OS is capable of allowing multiple applications at the same time. These OS include UNIX and Windows 2000. A multiprocessing OS is capable of supporting and utilizing multiple computer processors. Multithreading is an OS that allow various parts of software programs to run simultaneously. Some examples of this type of OS are Linux, UNIX, and Windows 2000 (Operating system types, n. d.).

The history of operating systems dates back in 1954 where the first OS named UNIVAC 1103 was developed by MIT. After a year, General Motors made one for the IBM 701. In 1960, computers do not contain OS, instead, machines loaded the programs from the punched paper and tape which work until the program had finished the task or it crashed. Within this decade, IBM produced System/360 used by the mainframe computers. By 1970s, midrange systems were developed such as UNIX and VMS. During the microcomputer era in the 1980s, MS DOS and MAC OS shared in the competition. The Windows Era in the 1990s began with Windows 95 and in this decade, the FreeBSD and BeOS also became popular UNIX operating systems. From that time, most commonly used operating systems were from

the Microsoft Windows family, Linux, and other UNIX-like operating systems (i. e. Mac OS X) (History of Operating Systems, n. d.).

The Microsoft operating systems include the series MS-DOS, Windows95, and WindowsNT. The main benefits of these OS are availability of inexpensive applications programs hence less costly than other OS and compatibility with all hardware configurations so you can use it on any hardware. The drawbacks were the lack of decent connectivity and interoperability. Also, significant maintenance is required for security resources since there is a history of viruses infecting the system (Hughes, n. d.).

The UNIX operating system has the following advantages: excellent connectivity, stability, scalability and multi-user/multi-tasking. In 25 years existence in the market, UNIX proved to be very reliable and offers many connectivity options. The drawbacks of this system are modifications tend to be proprietary to specific vendor and do not make it back into the UNIX base used by all vendors and not all manufacturers offer machines throughout the capabilities spectrum hence new versions of applications software should be purchased for the new vendor/architecture (Hughes, n. d.).

The Linux operating system has the following benefits: portability and connectivity capabilities. Portability is significant since Linux introduces upgrades such as new hardware yearly. Also, Linux offers connectivity capabilities such as TCP/IP connectivity, drivers for many serial, ISDN and Frame Relay controllers, Appletalk for Mac/Linux connectivity, SAMBA for Microsoft Windows/Linux connectivity and IPX protocol support for Novell Netware/Linux connectivity. The great thing about Linux is the investment is

relatively small with acquisition price smaller or equal to zero. However, it also pose some drawbacks like Linux is not widely used and users need to be trained and productivity might be affected since users will have a hard time accepting the change (Hughes, n. d.).

Other operating systems like MacOS and Novell Netware are also common today. MacOS may be the best workstation for some applications like graphics but it was designed to operate only with Mac systems. Novell Netware initially offers file server capabilities for DOS and Windows-based systems but moved to legacy systems due to the trend of client-side interoperability capabilities (Hughes, n. d.).

Being involved in maintaining database storage and hosting web services for local companies, the connectivity, stability, scalability, multi-user, multi-platform, POSIX, non-proprietary and cost should be taken into account in selecting the best OS for BONC. Using the comparison table for OS, Linux is still the best OS for BONC. The decision was made based on Linux's excellent connectivity and stability, small-huge scalability, multi-user and multi-platform, POSIX compatibility, non-proprietary (which means easier to upgrade), and low cost. It is therefore concluded that BONC should stay at the present OS.

#### Platform Comparison Chart

System	Connectivity	Stability	Scalability	Multi-user	Multi-platform	POSIX	Non-proprietary
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Legacy System	Poor	Good	Medium-Huge	Yes	No	No	No
MS-DOS	None	Poor	Small	No	No	No	No
Windows 3. x	Poor	Poor	Small	No	No	No	No
Windows95	SMB Only	Fair	Small	Insecure	No	No	No
WindowsNT	SMB+	Fair	Small-Medium	Yes	Yes, 2	Some	No
UNIX	Excellent	Excellent	Small-Huge	Yes	Yes, Many	Yes	No
*BSD	Good	Excellent	Small-Large	Yes	No	Yes	Yes
Linux	Excellent	Excellent	Small-Huge	Yes	Yes, Many	Yes	Yes

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