



The Operating System war between Apple and Microsoft has been going on for a long time, but often no one thinks about the other contender in this war, Linux. Usually people not in the IT field think of Linux as a server operating system which is just one of its roles, but has made great strides to become an excellent desktop operating system. I want to talk about these operating systems and give you my position on why I feel Linux is better by first talking about the competition. The war for operating system dominance is shaping up to be a three way fight between Microsoft, Apple, and Linux.

Windows is of course the dominate player in this war of operating systems. Microsoft has created a very strong alliance with various software and hardware manufacturers that has helped keep Windows strong. Windows is the dominate operating system for a line of processor hardware referred to as x86. One of the biggest reasons for Windows dominance in the desktop market place is the massive amount of hardware Windows works with. Windows uses a technology dubbed plug&play which any hardware component designed for will be recognized, configured, and drivers installed. In the old days of computer hardware there was a huge need to set jumpers or DIP switches for the hardware so it wasn't on the same IRQ as another device manually. The technology behind plug&play has done away with the manual configuring of hardware like IRQs, and has helped Windows become the dominate mainstream OS.

Microsoft's Windows also has a lot of developer support behind it. There are lots of company creating software for Windows, and right away the biggest majority of that being from game manufactures. Ever since computers have been created the main thing driving them to get better and better is games. You don't need a high end 3D card that can render 3D graphics as good as Jurassic park just to type a report to your boss. Microsoft's Windows gains its popularity and market share because of all the game developers creating for it. This is one of Windows key components that make it successful. Microsoft released its newest version of Windows called Vista last year. This version of Windows is struggling to gain popularity due to its less than stellar performance with video games. The Vista version of Windows did improve upon security and stability, but it broke compatibility with some older software and drivers. This has made its adoption slower, except with new PC manufactures where they will be required to only ship Vista on newer computers. This makes a great opportunity for Linux to start being considered on new computers.

Apple is starting to get a greater hold on the desktop market than in the past. Apple's success with the Ipod has brought in a lot of new blood to their operating system. Apple running into road blocks on their old operating system bought out an operating system called NeXT, which is based on another operating system called BSD a derivative of Unix. Linux of course is based on Unix, but I'm sure you already knew that. This purchase of NeXT gave Apple the power to build their current operating system dubbed Mac OSX. They were having trouble expanding their previous operating system core due to its old nature, which was causing stability issues. They made a radical move instead of building a new OS from the ground up. They bought an operating system that has always been robust. This cut their development time dramatically on their very much welcomed operating system. They did a good job building their user interface for ease of use. Apple has always been about easy of use with their operating systems and has always rivaled Microsoft in regards to the use experience.

The operating system was not the least of Apple's recent changes. Apple's line of processors was called the PowerPC. This line of processor was made by Motorola and developed by IBM. These processor were very good at processing multi-media information. Which in the early days of computing is how Mac's became known for being used for artistic purposes. They could perform graphically intense things easier than their x86 brethren at the time. The x86 line of processors were creating more and more of a lead over the

PowerPC processors, and Apple needed to make some changes quick or they would lose even more market share of the personal computer business. Because the PowerPC line of processors weren't keeping up with the x86 line from Intel and AMD they decided they would switch their operating system to x86. This switch has put Apple in a better hardware position than with the PowerPC line of processors not showing any new progress with speed and efficiency compared to Intel x86 family of processors. This wouldn't have been as easy for them if it wasn't for their operating system being based on Unix, which has always been very flexible on which processors it could run on.

Organizations like Ubuntu, Fedora, and Suse are creating great alternatives for the desktop market place. Companies like Dell are now offering versions of Ubuntu pre-installed on their computers. Having a big PC manufacturer like Dell offering Linux pre-installed on their computers offers a great low cost alternative to Windows. Unlike both Windows and Mac, you can get a copy of various distributions of Linux for free. The various versions of Linux are created under open source and is considered under a general public license like GPL. This creates many benefits with the public being able to look at the code, customize the code, or even fix the code. You can get full suites of software for Linux that are free, when commonly hundreds of dollars for Apple's and Microsoft's operating systems. Another nice feature about the various Linux distributions is they come with a package management feature. This software allows you to search for Linux software, which downloads and installs it very easily. These features alone can provide better value for any one when they just need basic computer usage like surfing the internet and doing work.

Linux has a very strong presence on the server side of the market place with it growing up rapidly into a great desktop operating system. The strong support it's gaining on the desktop side probably relates to how easily it's working with both old and new hardware. The hardware requirements for a Linux operating system are pretty minimal compared to the system requirements of Windows, and on a lesser extent OSX. A lot of the hardware available to Windows machines will be compatible with Linux right from the first install without doing anything. This makes the transition to Linux even easier when you don't need to worry about your hardware not working. Linux runs on pretty much all processors available. Currently it is most popular on the x86 line of processors, but can be installed on PowerPC processors too even the server clusters with hundreds linked together. The scalability of Linux is one of its great strong suits.

The great thing about all these operating systems is the family of processors they are running on. This will create more reasons for x86 processor manufacturers to keep making constant improvements in their hardware. With all the major operating systems predominately running on the same hardware. Determining how well an operating system is running will be total dependent on how good each operating system is created. Linux with way more developers than any other operating system takes advantages of the newest hardware advances sooner than the others. The problem still persists that none of the software can run natively between these operating systems. Despite them all running on the same hardware they all have different ways of accessing that hardware and executing the software. There are various ways to run Windows software on both Linux and Mac operating systems, but none of these are a truly native option to the operating system. There is the solution of software emulation that will allow one operating system to run within another operating system, but this is limited and "currently" doesn't work well with 3D applications like games that need direct access to the hardware instead of simulated access to the hardware.

In conclusion my position on which operating system would be the best is **Linux**, because of its great flexibility and scalability to hardware, also with its money saving advantages to open source software being free. The more and more that we do every thing on the internet; the less it will matter which operating system we use. Linux offers great compatibility and stability with both older and newer hardware. Installing Linux on an older Windows computer will make it feel many times faster than it used to be. I would have to caution about the learning curve on Linux, because if you need to fix something can be harder than on Windows or Apple, but I feel the benefits can outweigh this.

The operating systems that I run personally are Microsoft's Windows XP on my Desktop machine, then on my Laptop I run Ubuntu Linux. I used to run Windows XP on my laptop, then I upgraded to Windows Vista, but the performance kept getting worse on my laptop, so I finally put Ubuntu Linux on it and I love it on my laptop.

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