

Windows XP

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Windows XP Performance

Windows XP has been developed by Microsoft with an eye on performance. Upon its release it was promised to be the best among its predecessors.

Memory utilization has been enhanced in Windows XP to run with as minimal as 64 MB of RAM although 128 MB is recommended to make use of supported graphically rich applications. Also, the system makes use of high quality hardware components to boost its performance especially high end video adaptors. Throughout the development, Microsoft has put XP through extensive testing including side-by-side analysis, benchmarking applications to measure work load and beta releases to allow users to submit feedback which was instantly provided to developers to correct problems.

To enable faster loading, approximately 30 seconds for most computers, the boot loader and registry initialization were modified, user credentials were cached to enable the system to bypass the delay caused by network authentication, also information from the hard disk was pre-fetched into optimized areas, thus, speeding up loading drivers and programs when Windows loads. It was also noted how laptops were awakened from a power preservation state of hibernation or a standby in optimal time that is 20 and 2 seconds respectively.

Run time performance was boosted through memory management techniques that monitor I/O operations and space allocated for drivers and programs. Virtual memory extended the physical memory barriers and allowed Windows XP to allocate more for applications while reserving the faster physical memory for system files. Managing how the CPU runs services such as system restore, a service to recover system state, and windows trouble shooting help system; is part of the overall resource management enhanced features in Windows XP. In addition, the system is taking advantage of user idle time to do some tasks as file organization, clean up and partial de-fragmentation to fix files according to usage.

My Conclusion

The progress in software and especially operating systems development has allows been a bottle neck to hardware advancements. Most systems today are much more capable in terms of speed and performance. Without such efforts from companies like Microsoft, Linux and Apple to boost operating systems the user experience with computers will be negative due to software limitations. Speeding up booting and run time is vital, running heavy multimedia applications is a priority to home and office users alike.

References

- S. Sechrest, M. Fortin, " Windows XP Performance ", Microsoft TechNet, 1 Jun 2001
<http://www.microsoft.com/technet/prodtechnol/winxppro/evaluate/xpperf.msp#EDGAC> > , 29 Oct 2001 Alex Nichol, " Virtual Memory in Windows XP ", Windows Support Center, 21 Feb 2006 <http://www.aumha.org/win5/a/xpvm.php> > , 29 Oct 2006 M. Russinovich, D. Solomon, " Windows XP: Kernel Improvements Create a More Robust, Powerful, and Scalable OS ", Microsoft MSDN Library, 1 Dec 2001
<http://msdn.microsoft.com/msdnmag/issues/01/12/XPKernel/default.aspx> > , 29 Oct 2006