



Intel Corporation (Intel) commissioned Principled Technologies (PT) to compare the performance on Microsoft Windows Vista of an Intel vPro technology based PC with that of three other platforms on a common business professional data security scenario. We tested a scenario which uses Windows Vista BitLocker Drive Encryption. We compared the performance of the following four platforms on this scenario:

- Intel vPro technology with Intel Core 2 Duo processor E6700 on an Intel 965 (DQ965GF) motherboard
- Intel Pentium D processor 930 on an Intel D945GTP motherboard
- Intel Pentium 4 processor 630 on an Intel D945GTP motherboard
- Intel Pentium 4 processor on an Intel D865GBF motherboard

Scenario: copying a folder on an encrypted volume

Luke Morningstar works as a research and development scientist at Glantec Pharmaceuticals. Nearly all of his work is highly confidential and must be encrypted, so the IT department has employed Windows Vista's BitLocker technology to encrypt his entire hard disk partition. Thus, all of Luke's work now occurs on an encrypted drive. He is preparing to go through the test results files from one of Glantec's latest clinical studies. Luke opens the folder where he keeps a golden, unchanging version of those files and makes a working copy of them on his desktop.

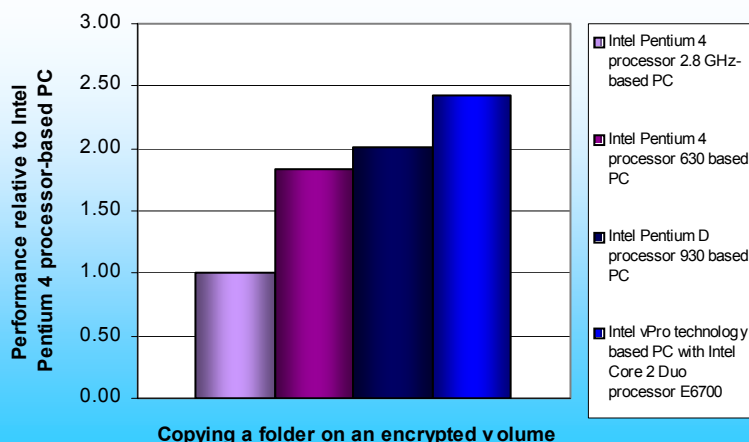
The Intel vPro technology-based PC with the Intel Core 2 Duo processor E6700 outperformed the older systems on copying a folder on a BitLocker encrypted volume due to the faster processor and chipset. The improvement is likely due to the processor's larger L1 cache, faster memory access, and, of course, multiple cores. The Intel vPro technology motherboard's TPM 1.2 hardware and the Windows Vista support for TPM also eliminated the need for a USB drive to store the password information. We had to use a USB drive to hold that information on the other test systems.

For more information on these tests and to see the full test report, visit:
www.principledtechnologies.com/clients/reports/Intel/vProVistaEmp.pdf.

KEY FINDINGS

- The Intel® vPro™ technology based PC with the Intel® Core™ 2 Duo processor E6700 yielded significant performance advantages for users on our business professional data security BitLocker encryption scenario.
- The Intel vPro technology-based PC with the Intel Core 2 Duo processor E6700 finished the scenario 1.21 times faster than the Intel® Pentium® D processor 930-based PC.
- The Intel vPro technology based PC with the Intel Core™ 2 Duo processor E6700 also finished the task 2.43 times faster than the Intel® Pentium® 4 processor 2.8GHz based PC with the Intel D865GBF motherboard.
- These performance improvements translate into multi-second time savings that would be significant to users.

Data security BitLocker encryption scenario



PERFORMANCE RESULTS (seconds)				TASK	COMPARATIVE RATING			
Intel Pentium 4 processor 2.8 GHz on Intel D865GBF	Intel Pentium 4 processor 630 on Intel D945GTP	Intel Pentium D processor 930 on Intel D945GTP	Intel vPro with Core 2 Duo processor E6700 on Intel DQ965GF		Intel Pentium 4 processor 2.8 GHz on Intel D865GBF	Intel Pentium 4 processor 630 on Intel D945GTP	Intel Pentium D processor 930 on Intel D945GTP	Intel vPro with Core 2 Duo processor E6700 on Intel DQ965GF
64.00	35.01	31.79	26.34	Copying a folder on an encrypted volume	1.00	1.83	2.01	2.43