



INTEL AND VIRTUAL IRON REPORT OUTSTANDING PERFORMANCE ON NEW INTEL XEON 7300

Overview

September 5, 2007 – Intel today announced results of its vConsolidate Benchmark performance tests of the new Quad-Core Intel Xeon Processor 7300 series which brings the energy-efficient virtualization performance of Intel® Core Architecture to MP server platforms. The vConsolidate Benchmark was run against Virtual Iron 4.0 – among the first server virtualization software to take advantage of improved energy-efficiency, performance and new hardware assist virtualization extensions in the Quad-Core Intel Xeon Processor 7300 series. The results were jointly performed by Intel and Virtual Iron performance labs and show a remarkable improvement in virtualization performance and scalability.

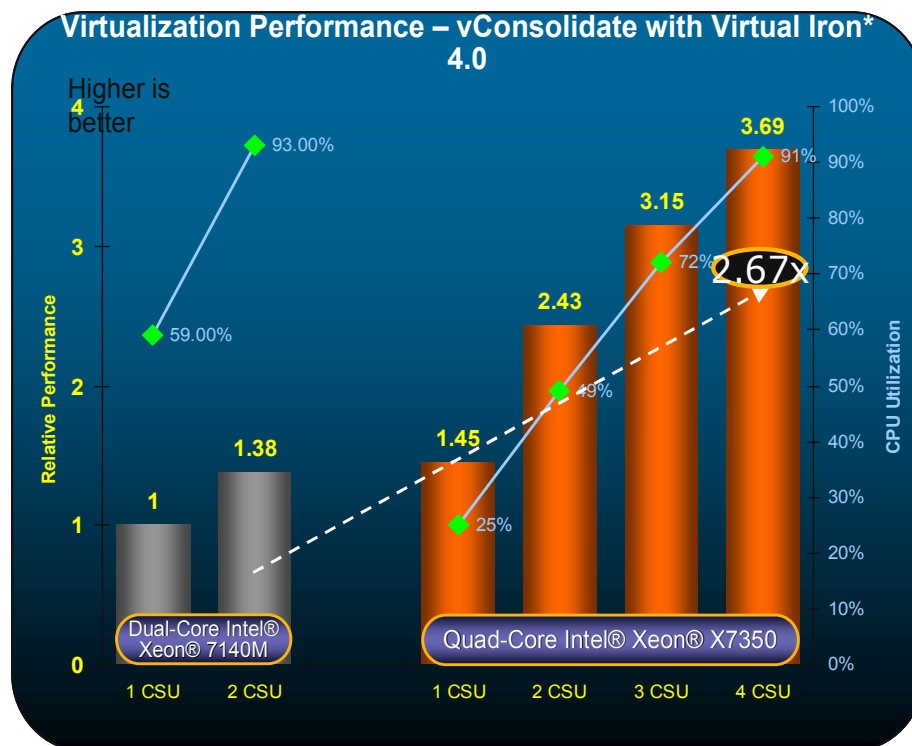


Figure One – Virtual Iron 4.0 witnessed 167% virtualization performance improvement.

Test Results

As shown in Figure One, the test found that the Quad-Core Intel Xeon processor 7300 platform delivered up to 167% virtualization performance improvement on Virtual Iron Version 4.0 software. Additionally, the Quad-Core Intel Xeon processor 7300 series-based server utilizing Virtual Iron 4.0 was able to run twice as many Consolidated Stack Units (CSUs) relative to Intel's previous dual core MP platforms. This unprecedented scalability translates into increased virtualization performance, more VM capacity and higher consolidation ratios improving even further the benefits of virtualization for enterprise data centers.

Virtual Iron's comprehensive virtualization and management software is very complementary to multi-core processing and enables end-users to fully exploit the power of Intel Quad-Core technology. For example, Virtual Iron provides up to 128 gigabytes of memory per physical server as well as the ability to do

symmetric multi-processing (SMP) where users can take advantage of up to eight CPUs in a single virtual machine, delivering the industry’s leading performance in a virtualized environment. In addition, Virtual Iron’s powerful virtual infrastructure management capabilities enable users to automatically optimize matching of workloads and available capacity. Virtual Iron was among the first virtualization solution providers to support Intel’s hardware–assisted virtualization technology (Intel VT). This enabled Virtual Iron to support unmodified Windows and Linux guest operating systems while delivering near native performance. Details of the vConsolidate benchmark appear below.

Performance Report: vConsolidate Profile #3 on Virtual Iron 4.0 Quad Core Intel® Xeon® Processor X7350 vs. Dual Core Intel® Xeon® 7140M

1. Configuration

The test configuration consisted of:

Platform	New Platform	Baseline
Processor details	Quad-Core Intel® Xeon® Processor X7350 (2.93GHz/1066/8MB L2)	Dual-Core Intel® Xeon® processor 7140M (3.4GHz/800/16MB L3)
Chipset	Clarksboro A0 with 4 independent FSB at 1066 MT/s and 64MB snoop filter	Intel E8500 (Twincastle) with 800MT/s
Memory	16x2GB	16x2GB
Memory details	FBD PC2 5300F	DDR2 PC2-5300P
BIOS settings:	SFC4UR.86B.01.00.0016 Enhanced Intel SpeedStep(R) Tech: Disable Virtualization Technology: Enabled Execute Disable Bit: Disabled Hardware Prefetch: Disabled Adjacent Cache Line Prefetch: Disabled	SHW40.86B.RC29.09.00.0057 Virtualization Technology: enabled Hardware Prefetch: Disabled Adjacent Cache Line Prefetch: Disabled
Fiber Channel Adapters	QLE 2462 (2Gbps auto-negotiation)	
+SAN HDD	14X Seagate Cheetah 36GB 15Krpm Fibre Channel HDD	
Storage Configuration	SANBLOC2 2Gb RAID 14-slot Rackmount RAID0	

Table 1 - Hardware configuration

Virtual Iron 4.0_20070807_000	
	No VM “pins” on a specific CPU manually
	All VM image files are stored on SAN storage
	Use VSTools. All guest OS load paravirtualization drivers.
	vConsolidate Beta uses profile 3

Table 2 - Software configuration

VMs	Profile #3	
	vCPUs	vMemory
Web	2	1.5GB
Java	2	2.0GB
Database	2	1.5GB
Mail	1	1.5GB
Idle	1	0.4GB

Table 3 – Profile configuration

For more information on the Intel vConsolidate performance benchmarks, visit:
<http://www.intel.com/pressroom/archive/releases/20070417gloc1.htm>.

For more information on Virtual Iron server virtualization and virtual infrastructure software, visit:
<http://www.virtualiron.com>

Intel® and Xeon® are trademarks of Intel Corporation.