

# VMware® VMmark™ V1.0.0 Results

**Vendor and Hardware Platform: Sun Blade X8440**  
**Virtualization Platform: VMware ESX Server V3.5.0**

**VMmark V1.0.0 Score =**  
**7.37 @ 5 Tiles**

**Tested By: Sun Microsystems, Burlington, MA**

**Test Date: Jan-2008**

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## Performance

	webservers		javaserver		mailserver		fileserver		database		
<b>TILE_0</b>	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
<b>p0</b>	1768.95	1.74	18148.47	1.09	1546.42	1.41	21.28	1.66	2197.88	1.47	1.46
<b>p1</b>	1761.55	1.73	18097.83	1.09	1608.78	1.47	21.33	1.66	2205.60	1.48	1.47
<b>p2</b>	1733.55	1.70	17671.75	1.06	1825.38	1.66	21.05	1.64	2215.22	1.48	1.49
<b>TILE_1</b>	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
<b>p0</b>	1929.35	1.89	18161.45	1.09	1469.60	1.34	20.97	1.63	2067.82	1.39	1.44
<b>p1</b>	1913.65	1.88	18139.22	1.09	1613.22	1.47	20.90	1.63	2084.88	1.40	1.47
<b>p2</b>	1935.85	1.90	18130.92	1.09	1618.62	1.48	20.95	1.63	2107.75	1.41	1.48
<b>TILE_2</b>	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
<b>p0</b>	1923.45	1.89	18077.90	1.09	1401.42	1.28	21.47	1.67	2178.45	1.46	1.45
<b>p1</b>	1917.10	1.88	18111.12	1.09	1641.97	1.50	21.72	1.69	2126.55	1.42	1.49
<b>p2</b>	1889.15	1.85	18107.05	1.09	1759.67	1.60	21.56	1.68	2126.53	1.42	1.51
<b>TILE_3</b>	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
<b>p0</b>	1771.15	1.74	18095.17	1.09	1379.83	1.26	20.93	1.63	2124.28	1.42	1.41
<b>p1</b>	1780.58	1.75	18096.75	1.09	1572.65	1.43	20.99	1.64	2129.88	1.43	1.45
<b>p2</b>	1790.58	1.76	18111.72	1.09	1742.92	1.59	20.67	1.61	2131.35	1.43	1.48
<b>TILE_4</b>	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
<b>p0</b>	1934.05	1.90	18109.47	1.09	1190.75	1.09	22.05	1.72	2247.78	1.51	1.42
<b>p1</b>	1934.25	1.90	18119.45	1.09	1519.80	1.39	21.71	1.69	2239.62	1.50	1.49
<b>p2</b>	1900.67	1.87	17675.45	1.06	1603.42	1.46	21.85	1.70	2234.97	1.50	1.49
<b>p0_score:</b>	7.18										
<b>p1_score:</b>	7.37										
<b>p2_score:</b>	7.44										

Unreviewed\_VMmark\_Score:

7.37

## Configuration

### System Under Test (SUT)

Processor Vendor and Model	Dual-Core AMD Opteron(tm) Processor 8222
Processor Speed (GHz)	3.0
# of Sockets/Cores per Socket	4 Sockets / 2 Cores per Socket (8 Cores Total)
Primary Cache	64KB(I) + 64KB(D) on chip, per core
Secondary Cache	1MB on chip, per core
Other Cache	None
Memory	64GB(16x4GB) 667 MHz ECC DDR2 Dual Rank
Disk Subsystem	SAS
# of Disk Controllers	3
Host Bus Adapters Vendor and Model	4Gb FC Dual Port PCIe Express Module, QLogic
# of Host Bus Adapters	2
# of Network Controllers	2
Network Controllers Vendor and Model	20-Port Intel Corporation 82571EB Gigabit Ethernet Controller Network Express Module
Network Switches Vendor and Model	Linksys SRW2024
Network Speed	1000Base-T
Other Hardware	None
Other Software	None
Hardware Availability Date	Jan-2008
Software Availability Date	Jan-2008

### Virtualization Platform

Vendor, Product, and Version	VMware ESX Server 3.5.0
Virtualization Type	Hardware Virtualization
Supplemental Software	None
Virtualization Platform Availability Date	Dec-2007

### Storage

Array Vendor and Model/ Firmware Version	Sun StorageTek 2540
Fibre Channel Switches Vendor and Model	None

Used GB	335
Array Cache GB	Each controller has 512MB of battery-backed cache
Number and Size of LUNs	6x315GB(8x146GB/15K)
RAID Type	RAID 0
Number of Members per RAID Set	8
Disk Vendor and Model/Speed	Seagate Cheetah/15K

### Clients

# of Clients	5
System Model	Sun Blade X8420
Processor Vendor and Model	AMD Opteron 885
Processor Speed (GHz)	2.60
# of Sockets/# of Cores	4/8
Memory	32GB
Network Controller Vendor and Model	20-Port Intel Corporation 82571EB Gigabit Ethernet Controller Network Express Module
Operating System, Version, and Service Pack	Microsoft Windows Server 2003 R2 Enterprise Server SP2
Other Hardware	None
Other Software	None

## Notes for Workload

### SUT Notes

- BIOS setting: PowerNow is disabled
- The SUT had an access to 4 ethernet ports, but only 3 were used in the benchmark

### Virtualization Platform Notes

- Database VMs were stored on LUN 6. For all other VMs, each tile was stored on its own LUN
- Three vSwitch0, vSwitch1 and vSwitch2 bound to vmnic0, vmnic3 and vmnic2 (physical NICs) respectively
- Service Console was attached to vSwitch0
- Webserver VMs were attached to vSwitch1; the rest of the VMs were attached to vSwitch2
- Each vSwitch was configured to 120 ports (default 56)

### Operating System Notes

Microsoft Windows Server 2003 virtual machines were updated to Service Pack 2

### Software Notes

## Client Notes

- Each client had an access to 4 ethernet ports, but only 2 were used in the benchmark

## Other Notes

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