

# VMware® VMmark™ V1.0.0 Results

**Vendor and Hardware Platform: Sun Blade X8440**  
**Virtualization Platform: VMware ESX Server V3.0.2**

**VMmark V1.0.0 Score =**  
**7.02 @ 5 Tiles**

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

**Test Date: Dec-2007**

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## Performance

	webserver		javaserver		mailserver		fileserver		database		
<b>TILE_0</b>	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
<b>p0</b>	1746.92	1.71	18174.70	1.09	1404.05	1.28	21.11	1.65	2177.45	1.46	1.42
<b>p1</b>	1732.05	1.70	18177.00	1.09	1438.40	1.31	21.01	1.64	2165.68	1.45	1.42
<b>p2</b>	1737.50	1.71	18177.42	1.09	1457.47	1.33	21.41	1.67	2159.88	1.45	1.43
<b>TILE_1</b>	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
<b>p0</b>	1709.67	1.68	18053.00	1.09	1411.88	1.29	20.99	1.64	2222.03	1.49	1.42
<b>p1</b>	1682.67	1.65	18036.30	1.09	1416.72	1.29	20.46	1.59	2197.57	1.47	1.40
<b>p2</b>	1700.72	1.67	18061.70	1.09	1405.33	1.28	20.98	1.63	2217.05	1.49	1.41
<b>TILE_2</b>	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
<b>p0</b>	1723.20	1.69	18125.17	1.09	1285.85	1.17	19.38	1.51	2133.93	1.43	1.36
<b>p1</b>	1720.40	1.69	18127.10	1.09	1385.35	1.26	19.43	1.51	2115.45	1.42	1.38
<b>p2</b>	1724.78	1.69	18119.83	1.09	1311.50	1.20	19.36	1.51	2115.65	1.42	1.36
<b>TILE_3</b>	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
<b>p0</b>	1708.50	1.68	18024.60	1.08	1285.08	1.17	20.41	1.59	2212.03	1.48	1.38
<b>p1</b>	1672.72	1.64	18030.75	1.09	1552.72	1.42	19.98	1.56	2210.82	1.48	1.42
<b>p2</b>	1688.85	1.66	18054.35	1.09	1548.60	1.41	20.61	1.61	2227.95	1.49	1.44
<b>TILE_4</b>	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
<b>p0</b>	1720.55	1.69	18149.55	1.09	1200.50	1.09	20.07	1.56	2133.93	1.43	1.35
<b>p1</b>	1700.10	1.67	18124.95	1.09	1425.35	1.30	19.86	1.55	2121.18	1.42	1.39
<b>p2</b>	1695.72	1.66	18127.05	1.09	1521.15	1.39	20.12	1.57	2117.45	1.42	1.41
<b>p0_score:</b>	6.93										
<b>p1_score:</b>	7.02										
<b>p2_score:</b>	7.06										
<b>Unreviewed_VMmark_Score:</b>	7.02										

## 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) 667MHz ECC DDR2 Dual Rank
Disk Subsystem	SAS
# of Disk Controllers	3
Host Bus Adapters Vendor and Model	4Gb FC Dual Port PCIe ExpressModule, 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	Dec-2007
Software Availability Date	Dec-2007

**Virtualization Platform**

Vendor, Product, and Version	VMware ESX Server V3.0.2
Virtualization Type	Hardware Virtualization
Supplemental Software	None
Virtualization Platform Availability Date	Oct-2006

**Storage**

Array Vendor and Model/ Firmware Version	Sun StoregeTek 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(8 146GB/15K)
RAID Type	RAID 1
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 Edition 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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