

VMware® VMmark™ V1.0.0 Results

Vendor and Hardware Platform: Dell PowerEdge R805
Virtualization Platform: VMware ESX 3.5 Update 1 (build 82663)

VMmark V1.0.0 Score =
7.96 @ 6 Tiles

Tested By: Dell Inc.

Test Date: May-2008

Performance Section
[Performance](#)

Configuration Section
[Configuration](#)

Notes Section
[Notes for Workload](#)

Performance

	webservers		javaserver		mailserver		fileserver		database		
TILE_0	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1703.58	1.67	18055.53	1.09	1512.88	1.38	18.14	1.41	1956.20	1.31	1.36
p1	1694.20	1.66	17579.08	1.06	1392.83	1.27	18.11	1.41	1945.08	1.30	1.33
p2	1695.78	1.66	18026.75	1.09	1299.95	1.19	18.22	1.42	1942.30	1.30	1.32
TILE_1	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1825.53	1.79	17997.47	1.08	1483.83	1.35	18.08	1.41	1960.62	1.31	1.37
p1	1812.60	1.78	18015.47	1.08	1456.85	1.33	17.97	1.40	1953.95	1.31	1.36
p2	1805.60	1.77	17530.50	1.06	1285.38	1.17	18.00	1.40	1959.17	1.31	1.32
TILE_2	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1705.40	1.67	18003.70	1.08	1453.12	1.32	18.20	1.42	1844.00	1.24	1.33
p1	1698.28	1.67	17961.53	1.08	1535.92	1.40	18.12	1.41	1837.88	1.23	1.34
p2	1699.55	1.67	18004.60	1.08	1332.50	1.21	18.09	1.41	1841.53	1.23	1.31
TILE_3	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1702.03	1.67	17989.03	1.08	1342.08	1.22	18.07	1.41	1881.58	1.26	1.31
p1	1694.88	1.66	18000.88	1.08	1537.78	1.40	18.24	1.42	1902.35	1.27	1.36
p2	1691.70	1.66	18001.33	1.08	1467.08	1.34	18.16	1.42	1914.62	1.28	1.34
TILE_4	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1745.55	1.71	17836.10	1.07	1327.08	1.21	19.20	1.50	1763.65	1.18	1.32
p1	1737.83	1.71	17868.62	1.08	1389.78	1.27	18.92	1.47	1728.67	1.16	1.32
p2	1740.08	1.71	17430.60	1.05	1340.67	1.22	18.86	1.47	1712.05	1.15	1.30
TILE_5	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1809.78	1.78	17765.25	1.07	1191.25	1.09	17.68	1.38	1718.97	1.15	1.27
p1	1799.90	1.77	17335.95	1.04	1439.92	1.31	17.53	1.37	1676.28	1.12	1.30
p2	1792.67	1.76	17745.55	1.07	1488.95	1.36	17.59	1.37	1670.67	1.12	1.31
p0_score:	7.96										
p1_score:	8.01										
p2_score:	7.90										
Unreviewed_VMmark_Score:	7.96										

Configuration

System Under Test (SUT)

Processor Vendor and Model	Quad-Core AMD Opteron 2360 SE
Processor Speed (GHz)	2.50
# of Sockets/Cores per Socket	2 Sockets / 4 Cores per Socket (8 Cores Total)
Primary Cache	64 KB I + 64 KB D on chip per core
Secondary Cache	512 KB I+D on chip per core
Other Cache	2 MB I+D L3 on chip per chip
Memory	32 GB (8 x 4 GB) PC2-5300 667MHz Registered ECC DDR2 DIMM
Disk Subsystem	SAS (OS), FC SAN (VMs)
# of Disk Controllers	1
Host Bus Adapters Vendor and Model	QLogic Corp QLE2462
# of Host Bus Adapters	2
# of Network Controllers	2
Network Controllers Vendor and Model	Intel PRO 1000PT Dual Port 1GbE
Network Switches Vendor and Model	Dell PowerConnect 5224
Network Speed	1000Base-T
Other Hardware	None
Other Software	None
Hardware Availability Date	Jun-2008
Software Availability Date	Apr-2008

Virtualization Platform

Vendor, Product, and Version	VMware ESX 3.5 Update 1
Virtualization Type	Hardware Virtualization
Supplemental Software	None
Virtualization Platform Availability Date	Apr-2008

Storage

Array Vendor and Model/ Firmware Version	1. EMC CX300, version 02.26.300.5.005 2. EMC CX300, version 02.26.300.5.005 3. EMC CX300, version 02.26.300.5.005 4. EMC CX300, version 02.26.300.5.005
Fibre Channel Switches Vendor and Model	Brocade Silkworm 3800
Used GB	416
Array Cache GB	1. EMC CX300, 2048MB 2. EMC CX300, 2048MB 3. EMC CX300, 2048MB 4. EMC CX300, 2048MB
Number and Size of LUNs	LUN 1: 120GB LUN 2: 120GB LUN 3: 120GB LUN 4: 120GB LUN 5: 120GB LUN 6: 120GB LUN 7: 260GB
RAID Type	RAID10 (all LUNs)
Number of Members per RAID Set	LUN 1: 10 members LUN 2: 10 members LUN 3: 10 members

	LUN 4: 10 members LUN 5: 10 members LUN 6: 10 members LUN 7: 16 members
Disk Vendor and Model/Speed	Fujitsu Enterprise/15K
Clients	
# of Clients	6
System Model	PowerEdge 1650, 4 x PowerEdge 1750, PowerEdge 1850
Processor Vendor and Model	Intel Xeon
Processor Speed (GHz)	1.40 (1650), 2 x 3.20 (1750), 2 x 3.06 (1750), 2.80 (1850)
# of Sockets/# of Cores	2/2 (1650), 2/2 (1750), 2/4 (1850)
Memory	2 GB
Network Controller Vendor and Model	Intel PRO/1000 XT Network Connection (1650), Broadcom NetXtreme Gigabit Ethernet (1750), Intel PRO/1000 MT Network Connection (1850)
Operating System, Version, and Service Pack	Microsoft Windows Server 2003 Enterprise Edition SP2
Other Hardware	None
Other Software	None

Notes for Workload

SUT Notes

- The PERC6/i Integrated controller contained 1 73GB/15K drive for OS.
- BIOS settings:
Optical Drive Controller = Off (default On)
Embedded Gb NICs Disabled (default Enabled)

Virtualization Platform Notes

- Four vSwitches (0-3) bound to four physical NICs, vmnic0-3, respectively.
- Each vSwitch was configured to 120 ports (default 56).
- Service Console was shared with vSwitch0.
- Database VMs attached to vSwitch0;
Standby, Web, JavaServer 0-2 VMs attached to vSwitch1;
Standby, Web, JavaServer 3-5, and FileServers attached to vSwitch2;
Mailserver VMs attached to vSwitch3.
- Database VMs were stored on LUN 7. For all other VMs, each tile was stored on its own LUN.
- Virtualized MMU Enabled on WebServer VMs (default Automatic)
- Ethernet Adapter Type set to Enhanced vmxnet for all VMs.
- vmfs2 module was unloaded prior to the benchmark run.
- Disk.SchedNumReqOutstanding 128 (default 32)

Operating System Notes

- Microsoft Windows Server 2003 virtual machines were updated to Service Pack 2, and [KB 933360](#) was applied.

Software Notes

Client Notes

- [KB 933360](#) was applied.

Other Notes

This is a full disclosure report for a VMmark benchmark result. All published VMmark results must be from fully-compliant tests for which a full disclosure report is publicly available.

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