

VMware® VMmark™ V1.1 Results

Vendor and Hardware Platform: Unisys ES7000 Model 7405R G1
Virtualization Platform: ESX 3.5 U2 Build 110268

VMmark V1.1 Score =
21.96 @ 15 Tiles

Tested By: Unisys Corp. Mission Viejo, CA

Test Date: 10/10/2008

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Performance

| | webservers | | javaserver | | mailserver | | fileserver | | database | | |
|---------------|------------|-------|------------|-------|------------|-------|------------|-------|----------|-------|------|
| TILE_0 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 1969.08 | 1.93 | 18010.75 | 1.08 | 1778.95 | 1.62 | 18.87 | 1.47 | 2245.43 | 1.50 | 1.50 |
| p1 | 1965.88 | 1.93 | 17577.20 | 1.06 | 1810.50 | 1.65 | 18.78 | 1.46 | 2235.70 | 1.50 | 1.49 |
| p2 | 1909.17 | 1.87 | 18013.03 | 1.08 | 1852.30 | 1.69 | 18.74 | 1.46 | 2229.65 | 1.49 | 1.50 |
| TILE_1 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 1822.08 | 1.79 | 18024.25 | 1.08 | 1788.85 | 1.63 | 18.11 | 1.41 | 1947.42 | 1.30 | 1.42 |
| p1 | 1800.22 | 1.77 | 18022.45 | 1.08 | 1784.58 | 1.63 | 18.02 | 1.40 | 1921.33 | 1.29 | 1.41 |
| p2 | 1764.42 | 1.73 | 17570.58 | 1.06 | 1801.35 | 1.64 | 17.99 | 1.40 | 1915.15 | 1.28 | 1.40 |
| TILE_2 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 1936.22 | 1.90 | 18043.97 | 1.09 | 1746.00 | 1.59 | 18.90 | 1.47 | 2185.85 | 1.46 | 1.48 |
| p1 | 1934.88 | 1.90 | 17993.80 | 1.08 | 1747.47 | 1.59 | 18.46 | 1.44 | 2166.82 | 1.45 | 1.47 |
| p2 | 1940.17 | 1.90 | 18051.72 | 1.09 | 1820.00 | 1.66 | 17.83 | 1.39 | 2164.55 | 1.45 | 1.47 |
| TILE_3 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 1822.88 | 1.79 | 18006.88 | 1.08 | 1911.42 | 1.74 | 18.93 | 1.48 | 2031.25 | 1.36 | 1.47 |
| p1 | 1794.45 | 1.76 | 17982.72 | 1.08 | 1847.70 | 1.68 | 18.64 | 1.45 | 2003.25 | 1.34 | 1.44 |
| p2 | 1764.40 | 1.73 | 17941.90 | 1.08 | 1838.35 | 1.68 | 18.11 | 1.41 | 2077.93 | 1.39 | 1.44 |
| TILE_4 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 1962.62 | 1.93 | 18049.92 | 1.09 | 1703.62 | 1.55 | 18.20 | 1.42 | 2043.62 | 1.37 | 1.45 |
| p1 | 1957.15 | 1.92 | 18047.10 | 1.09 | 1871.28 | 1.71 | 18.01 | 1.40 | 2035.40 | 1.36 | 1.47 |
| p2 | 1970.72 | 1.93 | 18032.42 | 1.09 | 1799.35 | 1.64 | 18.06 | 1.41 | 2035.20 | 1.36 | 1.46 |
| TILE_5 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 2051.97 | 2.01 | 18046.85 | 1.09 | 1606.47 | 1.46 | 18.64 | 1.45 | 2129.50 | 1.43 | 1.46 |
| p1 | 2047.70 | 2.01 | 18050.95 | 1.09 | 1628.72 | 1.48 | 18.61 | 1.45 | 2128.12 | 1.43 | 1.46 |
| p2 | 2041.03 | 2.00 | 18043.40 | 1.09 | 1822.00 | 1.66 | 18.52 | 1.44 | 2122.47 | 1.42 | 1.49 |
| TILE_6 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 2039.97 | 2.00 | 18056.22 | 1.09 | 1620.58 | 1.48 | 19.19 | 1.50 | 2253.60 | 1.51 | 1.49 |
| p1 | 2046.08 | 2.01 | 18042.25 | 1.09 | 1770.47 | 1.61 | 18.99 | 1.48 | 2231.50 | 1.50 | 1.51 |
| p2 | 2044.12 | 2.01 | 18051.58 | 1.09 | 1697.65 | 1.55 | 19.02 | 1.48 | 2231.50 | 1.50 | 1.50 |
| TILE_7 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |

| | | | | | | | | | | | |
|---------------------------------|---------|-------|----------|-------|---------|-------|--------|-------|---------|-------|------|
| p0 | 2020.30 | 1.98 | 17957.60 | 1.08 | 1672.00 | 1.52 | 19.21 | 1.50 | 2252.50 | 1.51 | 1.49 |
| p1 | 2015.40 | 1.98 | 17995.12 | 1.08 | 1661.12 | 1.51 | 19.27 | 1.50 | 2242.88 | 1.50 | 1.49 |
| p2 | 2015.40 | 1.98 | 17968.92 | 1.08 | 1484.55 | 1.35 | 19.31 | 1.50 | 2241.10 | 1.50 | 1.46 |
| TILE_8 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 1919.65 | 1.88 | 18040.83 | 1.09 | 1557.08 | 1.42 | 18.68 | 1.46 | 2200.45 | 1.47 | 1.44 |
| p1 | 1897.03 | 1.86 | 18018.60 | 1.08 | 1890.92 | 1.72 | 18.54 | 1.45 | 2185.35 | 1.46 | 1.49 |
| p2 | 1874.00 | 1.84 | 18030.30 | 1.09 | 1843.38 | 1.68 | 18.86 | 1.47 | 2183.78 | 1.46 | 1.48 |
| TILE_9 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 2054.88 | 2.02 | 18068.33 | 1.09 | 1469.30 | 1.34 | 18.34 | 1.43 | 2216.10 | 1.48 | 1.44 |
| p1 | 2054.47 | 2.02 | 18075.08 | 1.09 | 1747.83 | 1.59 | 18.89 | 1.47 | 2208.47 | 1.48 | 1.50 |
| p2 | 2043.30 | 2.01 | 18066.95 | 1.09 | 1811.30 | 1.65 | 18.74 | 1.46 | 2205.65 | 1.48 | 1.51 |
| TILE_10 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 2049.32 | 2.01 | 18038.03 | 1.09 | 1451.08 | 1.32 | 18.59 | 1.45 | 2201.65 | 1.48 | 1.44 |
| p1 | 2053.07 | 2.01 | 18039.75 | 1.09 | 1653.60 | 1.51 | 18.68 | 1.46 | 2189.88 | 1.47 | 1.48 |
| p2 | 2051.85 | 2.01 | 18033.70 | 1.09 | 1740.90 | 1.59 | 19.27 | 1.50 | 2184.07 | 1.46 | 1.50 |
| TILE_11 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 1917.67 | 1.88 | 18000.90 | 1.08 | 1500.78 | 1.37 | 18.57 | 1.45 | 2253.38 | 1.51 | 1.44 |
| p1 | 1892.58 | 1.86 | 18016.03 | 1.08 | 1601.78 | 1.46 | 18.44 | 1.44 | 2244.15 | 1.50 | 1.45 |
| p2 | 1867.83 | 1.83 | 18007.30 | 1.08 | 1688.17 | 1.54 | 18.21 | 1.42 | 2229.62 | 1.49 | 1.45 |
| TILE_12 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 1981.25 | 1.94 | 18081.60 | 1.09 | 1377.12 | 1.26 | 17.59 | 1.37 | 2097.50 | 1.41 | 1.39 |
| p1 | 1978.33 | 1.94 | 18071.97 | 1.09 | 1598.17 | 1.46 | 17.05 | 1.33 | 2140.20 | 1.43 | 1.42 |
| p2 | 1966.45 | 1.93 | 18071.83 | 1.09 | 1736.30 | 1.58 | 17.21 | 1.34 | 2140.68 | 1.43 | 1.45 |
| TILE_13 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 2028.12 | 1.99 | 17974.72 | 1.08 | 1268.35 | 1.16 | 17.81 | 1.39 | 2185.35 | 1.46 | 1.38 |
| p1 | 2016.80 | 1.98 | 17968.80 | 1.08 | 1506.95 | 1.37 | 18.53 | 1.44 | 2171.55 | 1.46 | 1.44 |
| p2 | 2029.97 | 1.99 | 17967.78 | 1.08 | 1662.58 | 1.52 | 18.60 | 1.45 | 2171.43 | 1.46 | 1.47 |
| TILE_14 | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | Actual | Ratio | GM |
| p0 | 2031.22 | 1.99 | 17957.45 | 1.08 | 1160.70 | 1.06 | 18.61 | 1.45 | 2244.60 | 1.50 | 1.38 |
| p1 | 2021.75 | 1.98 | 17983.70 | 1.08 | 1447.33 | 1.32 | 18.65 | 1.45 | 2227.43 | 1.49 | 1.44 |
| p2 | 2022.00 | 1.98 | 17981.33 | 1.08 | 1602.80 | 1.46 | 19.24 | 1.50 | 2227.03 | 1.49 | 1.48 |
| p0_score: | 21.66 | | | | | | | | | | |
| p1_score: | 21.96 | | | | | | | | | | |
| p2_score: | 22.06 | | | | | | | | | | |
| Unreviewed_VMmark_Score: | 21.96 | | | | | | | | | | |

Configuration

| Server and Network | |
|-------------------------------|------------------------------|
| Server Manufacturer and Model | Unisys ES7000 Model 7405R G1 |

| | |
|---------------------------------------|---|
| Processor Vendor and Model | Quad-core AMD Opteron 8356 |
| Processor Speed (GHz) | 2.3 |
| Number of Sockets/Cores per Socket | 8 Sockets / 4 Cores per Socket (32 Cores Total) |
| Primary Cache | 64KB I + 64KB D on chip per core |
| Secondary Cache | 512KB I+D on chip per core |
| Other Cache | 2MB I+D on chip per chip |
| Memory | 128GB (32x4GB) 667MHz |
| Disk Subsystem Type | SAS(OS) FC SAN(VMs) |
| Number of Disk Controllers | 5 |
| Number of Host Bus Adapters | 3 |
| Host Bus Adapter Vendors and Models | Emulex LPe11000 4Gb FC |
| Number of Network Controllers | 4 |
| Network Controller Vendors and Models | Intel PRO 1000PT 1GbE |
| Network Switch Vendors and Models | NETGEAR 16 port GigabitSwitch/GS516T |
| Network Speed | 1000-Base T |
| Other Hardware | None |
| Other Software | None |
| Hardware Availability Date | Aug-2008 |
| Software Availability Date | Aug-2008 |

Virtualization Software

| | |
|---|----------------------------------|
| Vendor, Product, Version, and Build | VMware ESX 3.5 U2 (build 110268) |
| Virtualization Type | Hardware Virtualization |
| Supplemental Software | None |
| Virtualization Software Availability Date | Aug-2008 |

Storage

| | |
|---|-------------------------------------|
| Array Vendor, Model, and Firmware Version | Unisys USS2200/JBD2000 Firmware A06 |
| Fibre Channel Switch Vendors and Models | None |
| Disk Space Used | 3640GB |
| Array Cache Size | None |
| Number and Size of LUNs | 15 LUNs with 239GB each LUN |
| RAID Type | RAID 0 |
| Number of Members per RAID Set | 14 |
| Disk Vendor, Model, and Speed | Seagate Cheetah ST318453FC 15KRPM |

Clients

| | |
|-------------------|----------------|
| Number of Clients | 15 |
| System Model(s) | Unisys ES3020L |

| | |
|---|--|
| Processor Vendor(s) and Model(s) | Intel Xeon |
| Processor Speed(s) (GHz) | 2.0 |
| Number of Sockets/Cores per Socket | 2 Sockets / 1 Cores per Socket (2 Cores Total) |
| Memory | 3GB |
| Network Controller Vendor and Model | Broadcom NetXtreme Gigabit Ethernet |
| Operating System, Version, and Service Pack | Microsoft Windows Server 2003 SP1 |
| Other Hardware | None |
| Other Software | None |

Notes for Workload

Server and Network Notes

Virtualization Software Notes

- . Four vSwitches (0-3). Each vSwitch was configured with 120 ports (56 default)
- . vSwitch0 was attached to vmnic7, used by the Service Console
- . vSwitch1,vSwitch2 and vSwitch3 were attached to vmnic4, vmnic5 and vmnic6 respectively
- . All the VMs of Tile0 to Tile4 were attached to vSwitch1
- . All the VMs of Tile5 to Tile9 were attached to vSwitch2
- . All the VMs of Tile10 to Tile14 were attached to vSwitch3
- . Each Tile was stored on one LUN except MailServers 12,13,14 on their own LUNs
- . Network adapter type was set to enhanced vmxnet for all VMs
- . Disabled ESX logging on all VMs except MailServers 2,3,4,10,11,12,13,14
- . Disabled Firewall and IPtables processes on ESX host
- . Pegasus service was stopped prior to run
- . VMFS2 was unloaded prior to run
- . Disk.SchedNumReqOutstanding = 128 (default 32)
- . Misc.RunningVCpuLimit = 192 (default 128)
- . VMFS3.MaxHeapSizeMB = 64 (default 16)
- . COW.MaxHeapSizeMB = 64 (default 32)
- . EtherswitchHashSize = 4 (default 1)

Operating System Notes

- . Microsoft Windows Server 2003 R2 Enterprise Edition Service Pack 2 on Windows-based virtual machines

Software Notes

Client Notes

Other Notes

The disk storage system was generally available since May 2003; it has been available within the last five years; but no longer available now.

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