

VMware® VMmark™ V1.1.1 Results

Vendor and Hardware Platform: HP ProLiant DL580 G7
Virtualization Platform: VMware ESX 4.0 Update 2 (Build 241301)

VMmark V1.1.1 Score =
75.01 @ 50 Tiles

Tested By: Hewlett-Packard

Test Date: 08-05-2010

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Performance

	webserver		javaserver		mailserver		fileserver		database		
TILE_0	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2074.85	2.04	18124.33	1.09	1781.25	1.62	19.44	1.52	2321.40	1.56	1.53
p1	2056.45	2.02	18123.75	1.09	1714.60	1.56	19.12	1.49	2323.15	1.56	1.52
p2	2068.03	2.03	18125.47	1.09	1598.05	1.46	18.77	1.46	2313.35	1.55	1.49
TILE_1	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1991.65	1.95	18121.55	1.09	1704.47	1.55	19.46	1.52	2302.88	1.54	1.51
p1	1963.30	1.93	18115.85	1.09	1802.20	1.64	19.17	1.49	2301.88	1.54	1.51
p2	1951.85	1.92	18118.55	1.09	1798.05	1.64	18.99	1.48	2288.90	1.53	1.51
TILE_2	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2059.65	2.02	17699.95	1.07	1350.70	1.23	19.99	1.56	2325.43	1.56	1.45
p1	2058.55	2.02	18168.62	1.09	1269.67	1.16	19.96	1.56	2327.00	1.56	1.44
p2	2054.53	2.02	18157.47	1.09	1240.42	1.13	19.84	1.55	2319.12	1.55	1.43
TILE_3	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2076.38	2.04	18148.05	1.09	1803.42	1.64	20.50	1.60	2302.05	1.54	1.55
p1	2054.03	2.02	18139.20	1.09	1824.20	1.66	20.21	1.58	2291.65	1.54	1.55
p2	2055.12	2.02	18172.67	1.09	1855.62	1.69	20.05	1.56	2279.35	1.53	1.55
TILE_4	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2068.30	2.03	18124.50	1.09	1782.03	1.62	19.97	1.56	2305.30	1.54	1.54
p1	2059.85	2.02	18131.10	1.09	1866.97	1.70	19.88	1.55	2301.15	1.54	1.55
p2	2061.95	2.02	18124.15	1.09	1882.92	1.72	19.76	1.54	2290.57	1.53	1.55
TILE_5	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2061.32	2.02	18154.03	1.09	1862.45	1.70	20.33	1.58	2306.82	1.55	1.56
p1	2059.15	2.02	18144.70	1.09	1717.42	1.57	20.31	1.58	2301.90	1.54	1.53
p2	2055.43	2.02	18152.53	1.09	1885.00	1.72	20.13	1.57	2290.40	1.53	1.56
TILE_6	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM

p0	2076.78	2.04	18084.53	1.09	1773.17	1.62	16.12	1.26	2301.80	1.54	1.47
p1	2071.15	2.03	18111.75	1.09	1895.03	1.73	15.90	1.24	2294.32	1.54	1.49
p2	2073.68	2.04	18121.42	1.09	1870.90	1.71	15.59	1.22	2284.00	1.53	1.48
TILE_7	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2058.05	2.02	17700.60	1.07	1826.35	1.67	17.84	1.39	2321.18	1.56	1.51
p1	2069.03	2.03	18152.88	1.09	1769.62	1.61	17.25	1.34	2318.62	1.55	1.50
p2	2068.88	2.03	18157.83	1.09	1796.25	1.64	17.32	1.35	2308.05	1.55	1.50
TILE_8	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1989.62	1.95	17702.47	1.07	1642.08	1.50	20.22	1.58	2304.62	1.54	1.50
p1	1966.55	1.93	18161.05	1.09	1755.30	1.60	19.89	1.55	2299.15	1.54	1.52
p2	1946.78	1.91	18135.47	1.09	1704.05	1.55	19.76	1.54	2288.75	1.53	1.50
TILE_9	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2033.05	2.00	18135.70	1.09	1721.47	1.57	19.47	1.52	2304.93	1.54	1.52
p1	2039.90	2.00	17673.75	1.06	1609.03	1.47	19.14	1.49	2301.05	1.54	1.48
p2	2049.35	2.01	18125.70	1.09	1347.08	1.23	18.87	1.47	2289.53	1.53	1.43
TILE_10	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1988.90	1.95	18125.78	1.09	1746.95	1.59	19.51	1.52	2302.20	1.54	1.51
p1	1965.53	1.93	18114.62	1.09	1723.42	1.57	19.07	1.49	2297.68	1.54	1.50
p2	1945.45	1.91	17658.97	1.06	1843.15	1.68	18.89	1.47	2285.38	1.53	1.50
TILE_11	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2061.05	2.02	17671.50	1.06	1692.72	1.54	20.43	1.59	2308.28	1.55	1.52
p1	2052.30	2.01	18145.75	1.09	1859.12	1.70	20.42	1.59	2301.60	1.54	1.56
p2	2051.50	2.01	18119.42	1.09	1811.60	1.65	20.06	1.56	2292.12	1.54	1.54
TILE_12	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2071.25	2.03	18095.83	1.09	1693.15	1.54	17.75	1.38	2292.88	1.54	1.49
p1	2055.93	2.02	18091.53	1.09	1702.65	1.55	17.46	1.36	2284.12	1.53	1.48
p2	2055.35	2.02	18398.40	1.11	1645.78	1.50	17.38	1.35	2274.40	1.52	1.47
TILE_13	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1984.75	1.95	18125.60	1.09	1755.85	1.60	19.55	1.52	2284.03	1.53	1.51
p1	1958.45	1.92	17696.38	1.07	1800.67	1.64	19.21	1.50	2274.43	1.52	1.50
p2	1947.33	1.91	18148.62	1.09	1678.72	1.53	18.90	1.47	2262.55	1.52	1.48
TILE_14	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2071.78	2.03	17700.47	1.07	1638.90	1.49	19.42	1.51	2316.07	1.55	1.50
p1	2074.45	2.04	18178.15	1.09	1839.53	1.68	19.22	1.50	2316.90	1.55	1.54
p2	2072.07	2.03	18148.97	1.09	1816.55	1.66	18.89	1.47	2307.78	1.55	1.53
TILE_15	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2073.72	2.04	17694.78	1.07	1661.97	1.52	20.37	1.59	2294.65	1.54	1.52

p1	2060.35	2.02	18173.03	1.09	1774.92	1.62	20.22	1.58	2292.72	1.54	1.54
p2	2071.12	2.03	18128.25	1.09	1901.53	1.73	20.37	1.59	2280.50	1.53	1.56
TILE_16	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1985.25	1.95	17673.45	1.06	1821.72	1.66	17.74	1.38	2297.43	1.54	1.49
p1	1965.15	1.93	18129.17	1.09	1834.22	1.67	17.49	1.36	2291.93	1.54	1.49
p2	1949.10	1.91	18126.75	1.09	1726.45	1.57	17.28	1.35	2278.93	1.53	1.47
TILE_17	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2063.68	2.03	18120.55	1.09	1669.83	1.52	19.87	1.55	2289.80	1.53	1.52
p1	2017.65	1.98	18120.70	1.09	1851.17	1.69	19.19	1.50	2281.32	1.53	1.53
p2	2057.65	2.02	18115.62	1.09	1952.20	1.78	18.91	1.47	2265.57	1.52	1.54
TILE_18	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2060.68	2.02	17719.17	1.07	1777.12	1.62	20.05	1.56	2297.25	1.54	1.53
p1	2056.43	2.02	18157.12	1.09	1732.90	1.58	19.83	1.55	2290.22	1.53	1.53
p2	2052.53	2.01	18162.75	1.09	1961.80	1.79	20.03	1.56	2278.12	1.53	1.57
TILE_19	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2044.92	2.01	18152.40	1.09	1661.33	1.51	20.09	1.57	2298.80	1.54	1.52
p1	2058.22	2.02	18135.58	1.09	1735.22	1.58	19.82	1.54	2292.43	1.54	1.53
p2	2058.72	2.02	18374.62	1.11	1826.22	1.67	19.77	1.54	2280.15	1.53	1.54
TILE_20	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2059.90	2.02	17718.92	1.07	1668.95	1.52	20.32	1.58	2289.90	1.53	1.51
p1	2058.12	2.02	18176.03	1.09	1855.67	1.69	20.10	1.57	2282.97	1.53	1.55
p2	2051.88	2.01	18144.53	1.09	1824.08	1.66	19.91	1.55	2272.70	1.52	1.54
TILE_21	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2073.35	2.03	17694.67	1.07	1591.72	1.45	17.86	1.39	2313.25	1.55	1.47
p1	2043.40	2.01	18120.35	1.09	1775.15	1.62	17.57	1.37	2308.62	1.55	1.50
p2	2054.47	2.02	18124.17	1.09	1779.78	1.62	17.15	1.34	2297.50	1.54	1.49
TILE_22	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1986.72	1.95	18151.33	1.09	1653.40	1.51	19.99	1.56	2294.30	1.54	1.50
p1	1959.40	1.92	17669.12	1.06	1795.40	1.64	19.85	1.55	2290.22	1.53	1.51
p2	1947.85	1.91	18110.65	1.09	1838.75	1.68	19.69	1.53	2279.90	1.53	1.52
TILE_23	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1711.58	1.68	18122.85	1.09	1674.47	1.53	17.55	1.37	2301.97	1.54	1.43
p1	1714.15	1.68	18123.83	1.09	1731.80	1.58	17.27	1.35	2293.60	1.54	1.43
p2	1738.22	1.71	18459.05	1.11	1832.33	1.67	16.92	1.32	2283.75	1.53	1.45
TILE_24	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2068.43	2.03	18147.10	1.09	1680.15	1.53	20.09	1.57	2323.85	1.56	1.53
p1	2055.53	2.02	17675.53	1.06	1774.25	1.62	19.80	1.54	2324.47	1.56	1.53

p2	2072.68	2.03	18494.47	1.11	1664.90	1.52	19.76	1.54	2316.30	1.55	1.52
TILE_25	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2052.47	2.01	18135.05	1.09	1535.15	1.40	19.52	1.52	2296.75	1.54	1.48
p1	2033.12	2.00	18127.10	1.09	1701.00	1.55	19.17	1.49	2286.62	1.53	1.51
p2	2051.85	2.01	18399.97	1.11	1910.12	1.74	19.00	1.48	2271.93	1.52	1.54
TILE_26	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1984.67	1.95	18112.40	1.09	1587.28	1.45	20.25	1.58	2304.88	1.54	1.50
p1	1960.72	1.92	18114.85	1.09	1653.33	1.51	20.15	1.57	2300.40	1.54	1.50
p2	1947.40	1.91	18115.90	1.09	1845.03	1.68	20.23	1.58	2288.15	1.53	1.53
TILE_27	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2059.20	2.02	18146.55	1.09	1681.33	1.53	17.79	1.39	2304.65	1.54	1.49
p1	2055.28	2.02	17678.33	1.06	1754.42	1.60	17.55	1.37	2300.07	1.54	1.49
p2	2053.05	2.01	18127.00	1.09	1789.80	1.63	17.39	1.36	2288.35	1.53	1.49
TILE_28	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1985.58	1.95	18158.20	1.09	1562.22	1.42	20.38	1.59	2299.62	1.54	1.49
p1	1964.67	1.93	17704.92	1.07	1788.10	1.63	20.14	1.57	2293.03	1.54	1.52
p2	1944.47	1.91	18125.50	1.09	1771.62	1.62	19.95	1.55	2280.82	1.53	1.52
TILE_29	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2018.05	1.98	18144.47	1.09	1644.65	1.50	20.27	1.58	2317.10	1.55	1.51
p1	2032.95	2.00	17707.65	1.07	1702.67	1.55	20.08	1.57	2315.62	1.55	1.52
p2	2025.40	1.99	18131.35	1.09	1736.00	1.58	19.97	1.56	2303.75	1.54	1.53
TILE_30	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2074.82	2.04	18125.67	1.09	1500.17	1.37	19.44	1.52	2309.20	1.55	1.48
p1	2063.78	2.03	18132.28	1.09	1766.15	1.61	19.18	1.49	2303.65	1.54	1.52
p2	2055.90	2.02	17686.05	1.06	1811.45	1.65	18.99	1.48	2289.35	1.53	1.52
TILE_31	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1960.47	1.92	18073.38	1.09	1574.03	1.44	19.19	1.50	2290.00	1.53	1.47
p1	1925.15	1.89	18070.28	1.09	1729.25	1.58	18.40	1.43	2282.53	1.53	1.48
p2	1904.95	1.87	18077.20	1.09	1693.35	1.54	18.42	1.44	2268.30	1.52	1.47
TILE_32	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2053.53	2.02	18154.45	1.09	1553.45	1.42	20.55	1.60	2313.93	1.55	1.51
p1	2038.40	2.00	17718.70	1.07	1832.80	1.67	20.08	1.56	2312.70	1.55	1.54
p2	2070.22	2.03	18143.88	1.09	1718.12	1.57	20.00	1.56	2304.68	1.54	1.53
TILE_33	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2081.07	2.04	18127.60	1.09	1484.83	1.35	19.91	1.55	2296.53	1.54	1.48
p1	2063.80	2.03	17709.67	1.07	1624.70	1.48	19.71	1.54	2289.75	1.53	1.50
p2	2056.45	2.02	18169.42	1.09	1727.83	1.58	19.60	1.53	2276.55	1.53	1.52

TILE_34	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2058.70	2.02	18160.92	1.09	1505.10	1.37	20.11	1.57	2305.82	1.55	1.49
p1	1873.62	1.84	18130.50	1.09	1693.47	1.54	19.81	1.54	2301.43	1.54	1.49
p2	1800.00	1.77	17668.47	1.06	1718.95	1.57	19.71	1.54	2289.25	1.53	1.47
TILE_35	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1981.05	1.94	18155.95	1.09	1453.33	1.33	18.07	1.41	2329.10	1.56	1.44
p1	1947.25	1.91	18147.58	1.09	1686.17	1.54	17.54	1.37	2325.22	1.56	1.47
p2	1923.62	1.89	18137.72	1.09	1783.60	1.63	17.49	1.36	2316.68	1.55	1.48
TILE_36	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1982.35	1.95	18131.05	1.09	1455.85	1.33	19.48	1.52	2330.25	1.56	1.46
p1	2020.00	1.98	18127.17	1.09	1658.28	1.51	19.28	1.50	2330.62	1.56	1.50
p2	2008.15	1.97	18121.20	1.09	1688.58	1.54	19.11	1.49	2319.53	1.55	1.50
TILE_37	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1786.45	1.75	18142.12	1.09	1501.38	1.37	20.36	1.59	2304.43	1.54	1.45
p1	1751.30	1.72	18172.62	1.09	1676.38	1.53	20.25	1.58	2295.43	1.54	1.47
p2	1726.42	1.69	17694.85	1.07	1773.72	1.62	20.24	1.58	2280.28	1.53	1.48
TILE_38	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1992.78	1.96	18164.88	1.09	1432.67	1.31	17.62	1.37	2311.43	1.55	1.43
p1	1964.15	1.93	18128.70	1.09	1546.00	1.41	17.48	1.36	2307.70	1.55	1.44
p2	1950.33	1.91	18116.47	1.09	1775.55	1.62	17.28	1.35	2299.50	1.54	1.48
TILE_39	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1988.20	1.95	18169.60	1.09	1397.20	1.27	17.94	1.40	2306.70	1.55	1.42
p1	1964.40	1.93	17711.62	1.07	1542.15	1.41	17.63	1.37	2301.40	1.54	1.44
p2	1943.22	1.91	18169.08	1.09	1753.92	1.60	17.36	1.35	2288.72	1.53	1.47
TILE_40	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1989.17	1.95	18157.90	1.09	1403.65	1.28	20.69	1.61	2300.10	1.54	1.47
p1	1963.28	1.93	18148.62	1.09	1613.97	1.47	20.25	1.58	2290.93	1.54	1.50
p2	1943.50	1.91	17696.30	1.07	1767.40	1.61	20.12	1.57	2281.80	1.53	1.51
TILE_41	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2048.25	2.01	18162.70	1.09	1328.08	1.21	19.59	1.53	2326.75	1.56	1.45
p1	2058.70	2.02	18143.55	1.09	1672.28	1.52	19.20	1.50	2320.57	1.55	1.51
p2	2042.90	2.00	17708.08	1.07	1746.28	1.59	18.93	1.48	2308.47	1.55	1.51
TILE_42	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2042.53	2.00	18155.80	1.09	1279.22	1.17	17.78	1.39	2326.68	1.56	1.41
p1	2029.85	1.99	18181.15	1.09	1605.47	1.46	17.52	1.37	2325.43	1.56	1.47
p2	2031.30	1.99	17704.20	1.07	1814.90	1.65	17.32	1.35	2315.78	1.55	1.49
TILE_43	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM

p0	2063.10	2.02	18137.55	1.09	1276.50	1.16	20.23	1.58	2306.50	1.55	1.44
p1	2060.15	2.02	18157.22	1.09	1624.85	1.48	19.98	1.56	2296.00	1.54	1.51
p2	2055.90	2.02	17696.67	1.07	1667.90	1.52	19.89	1.55	2277.88	1.53	1.51
TILE_44	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2059.50	2.02	18139.47	1.09	1368.72	1.25	20.19	1.57	2316.00	1.55	1.46
p1	2058.55	2.02	18119.90	1.09	1629.38	1.49	20.07	1.56	2309.53	1.55	1.51
p2	2053.35	2.02	18119.03	1.09	1653.40	1.51	20.02	1.56	2301.32	1.54	1.51
TILE_45	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	1895.65	1.86	18155.65	1.09	1269.55	1.16	19.64	1.53	2303.00	1.54	1.41
p1	1836.88	1.80	18161.92	1.09	1536.00	1.40	19.21	1.50	2289.72	1.53	1.45
p2	1871.80	1.84	17689.00	1.06	1735.05	1.58	19.07	1.49	2273.15	1.52	1.48
TILE_46	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2055.55	2.02	18166.97	1.09	1226.72	1.12	17.90	1.39	2316.28	1.55	1.40
p1	2058.88	2.02	18151.22	1.09	1510.17	1.38	17.62	1.37	2310.60	1.55	1.45
p2	2053.95	2.02	17697.75	1.07	1718.83	1.57	17.35	1.35	2302.82	1.54	1.48
TILE_47	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2063.68	2.03	17639.45	1.06	1136.95	1.04	20.78	1.62	2302.28	1.54	1.41
p1	2061.00	2.02	18091.33	1.09	1413.60	1.29	20.15	1.57	2290.72	1.53	1.47
p2	2054.82	2.02	18104.65	1.09	1584.20	1.44	20.04	1.56	2275.93	1.53	1.50
TILE_48	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2069.70	2.03	17673.00	1.06	1118.17	1.02	19.44	1.52	2312.22	1.55	1.39
p1	2059.12	2.02	18127.60	1.09	1547.97	1.41	19.02	1.48	2306.38	1.55	1.48
p2	1882.55	1.85	18123.47	1.09	1688.83	1.54	18.90	1.47	2294.22	1.54	1.48
TILE_49	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	Actual	Ratio	GM
p0	2078.30	2.04	17713.45	1.07	1158.58	1.06	20.25	1.58	2318.20	1.55	1.41
p1	2060.65	2.02	18114.58	1.09	1446.53	1.32	20.12	1.57	2313.93	1.55	1.48
p2	2051.57	2.01	18111.12	1.09	1726.53	1.57	19.83	1.55	2302.28	1.54	1.52
p0_score:	74.04										
p1_score:	75.01										
p2_score:	75.24										
Unreviewed_VMmark_Score:	75.01										

Configuration

Server and Network

Server Manufacturer and Model	HP ProLiant DL580 G7
Processor Vendor and Model	Intel Xeon X7560
Processor Speed (GHz)	2.27 GHz
Total Sockets/Total Cores/Total Threads	4 Sockets / 32 Cores / 64 Threads
Primary Cache	32 KB I + 32 KB D on chip per core
Secondary Cache	256 KB I+D on chip per core
Other Cache	24 MB I+D on chip per chip L3
BIOS Version	04/30/2010
Memory Size (in GB, Number of DIMMs)	1024GB (64 x 16 GB)
Memory Type and Speed	16GB per DIMM, Quad Rank 1067MHz registered DDR3
Disk Subsystem Type	SAS (OS), FC SAN (VMs)
Number of Disk Controllers	1
Disk Controller Vendors and Models	1 HP Smart Array P410i/512MB BBWC Controller
Number of Host Bus Adapters	2
Host Bus Adapter Vendors and Models	2 HP Storage Works FC1242SR Dual Channel 4Gb PCI-e HBA (Qlogic)
Number of Network Controllers	3
Network Controller Vendors and Models	2 HP NC364T PCI Express Quad Port Gigabit Server Adapter 1 Intel 10 Gigabit X520-SR2 Dual Port Server Adapter
Network Switch Vendors and Models	1 HP ProCurve Switch 5406zl
Network Speed	10 Gigabit for all database and webserver VMs 1 Gigabit for all remaining VMs and SUT
Other Hardware	None
Other Software	None
Hardware Availability Date (MM-DD-YYYY)	06-28-2010
Software Availability Date (MM-DD-YYYY)	06-28-2010

Virtualization Software

Vendor, Product, Version, and Build	VMware ESX 4.0 Update 2 Build 241301
Virtualization Type	Hardware Virtualization
Supplemental Software	None
Virtualization Software Availability Date (MM-DD-YYYY)	06-15-2010

Storage

Array Vendors, Models, and Firmware Versions	8 HP StorageWorks 4400 Enterprise Virtual Array, Firmware Revision 09006000 (4 with 96 disks; 4 with 48 disks)
Fibre Channel Switch Vendors and Models	2 HP StorageWorks 4/32B SAN Switch
Disk Space Used	3388 GB
Array Cache Size	2048MB per controller
Total Number of Physical Disks Used	578
Total Number of Enclosures/Pods /Shelves Used	48
Total Number of Physical Disks per Enclosures/Pods /Shelves Used	12
Total Number of Storage Groups Used	12
Number LUNs Used	100
LUN Size and Number of Disks Per LUN	50 LUNs, each 200GB, 48 disks per LUN 50 LUNs, each 36GB, 48 disks per LUN
RAID Type	RAID0 for VMs, RAID0/1 for OS
Number of Members per RAID Set	48
Disk Vendors, Models, and Speeds	576 HP StorageWorks 4Gb dual port FC EVA M6412 146GB 15K rpm for VMs 2 HP 72Gb 3G SAS 15K SFF DP HDD for OS
Clients	
Number of Clients	50
System Model(s)	HP ProLiant DL360 G5 HP ProLiant BL460c G6
Processor Vendor(s) and Model(s)	Intel Xeon X5450, E5440 (HP ProLiant DL360 G5) Intel Xeon E5520 (HP ProLiant BL460c G6)
Processor Speed(s) (GHz)	Clients 0-29: 3.0 GHz Clients 30-34, 38-50: 2.83 GHz Clients 35-37: 2.27 GHz
Total Sockets/Total Cores/Total Threads	Clients 0-29: 2 Sockets / 8 Cores / 8 Threads Clients 30-34, 38-50: 1 Socket / 4 Cores / 4 Threads Clients 35-37: 2 Sockets / 8 Cores / 8 Threads
Memory per Client	Clients 0-29: 4 GB Clients 30-34, 38-50: 2 GB

	Clients 35-37: 32 GB
Network Controller Vendors and Models	HP NC373i Multifunction Gigabit Network Adapter (HP ProLiant DL360 G5) HP NC532i Dual Port 10GbE Multifunction BL-c Adapter (HP ProLiant BL460c G6)
Operating System, Version, and Service Pack	Microsoft Windows Server 2003 Enterprise Edition SP2
Other Hardware	None
Other Software	None

Notes for Workload

Server and Network Notes

- The onboard controller contained 2 72GB/15K drives for OS with RAID 0/1
- Server BIOS settings:
 - Turbo Boost Technology enabled (up to 2.93 GHz, default enabled)
 - HP Power Regulator: HP Static High Performance Mode (default HP Dynamic Power Savings Mode)
 - HP Power Profile: Maximum performance (default Balanced Power and Performance)
- Qlogic HBA BIOS settings:
 - Fibre Channel tape support disabled (default enabled)
 - Data rate option set to 3 (default 2)
 - Execution Throttle set to 256 (default 16)
- Storage Configuration:
 - Each tile (except for database VM) was stored on its own LUN
 - Each database VM was stored on its own LUN
- vSwitch Configuration:
 - vSwitch0 attached to vmnic4 for the first Service Console
 - vSwitch1 attached to vmnic20 for the second Service Console
 - vSwitch2 attached to vmnic5 for all VMs (except for webserver and database VMs) of tiles 0 to 7, and javaserver VM of tile 40
 - vSwitch3 attached to vmnic6 for all VMs (except for webserver and database VMs) of tiles 8 to 15, and fileservr VM of tile 40

- vSwitch4 attached to vmnic7 for all VMs (except for webserver and database VMs) of tiles 16 to 23, and javaserver VM of tile 49
- vSwitch5 attached to vmnic12 for all VMs (except for webserver and database VMs) of tiles 24 to 31, and fileserver VM of tile 49
- vSwitch6 attached to vmnic13 for all VMs (except for webserver and database VMs) of tiles 32 to 39, and mailserver and standby VMs of tile 40
- vSwitch7 attached to vmnic21 for all VMs (except for webserver and database VMs) of tiles 41 to 48, and mailserver and standby VMs of tile 49
- vSwitch14 attached to vmnic18 for webserver and database VMs of tiles 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49
- vSwitch15 attached to vmnic19 for webserver and database VMs of tiles 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48

Virtualization Software Notes

- Unloaded VMFS2 prior to run
- Disabled IPtables processes and stopped firewall on the ESX host
- Disabled ESX logging on all VMs
- Used vmxnet3 and hardware version 7 for all VMs
- Enabled Virtualized MMU for all VMs (default Automatic)
- Removed IDE and floppy devices from all VMs
- Path policy for each LUN is set to RR (default MRU)
- CPU.HaltingIdleMsecPenalty = 0 (default 100)
- CPU.Quantum = 65 (default 50)
- IRQ.RoutingPolicy = 0 (default 2)
- Mem.BalancePeriod = 0 (default 15)
- Mem.SamplePeriod = 0 (default 60)
- Mem.ShareScanGHz = 0 (default 4)
- Numa.PageMigEnable = 0 (default 1)
- Net.MaxNetifRxQueueLen = 300 (default 100)
- Net.MaxNetifTxQueueLen = 1000 (default 500)
- Net.vmxnetThroughputWeight = 255 (default 0)
- Net.TcpipHeapMax = 120 (default 64)
- Disk.SchedNumReqOutstanding = 128 (default 32)
- BufferCache.SoftMaxDirty = 85 (default 15)
- /vmkernel/module/qla2xxx.o/options = "ql2xmaxqdepth=128 ql2xenablesi=1" set in /etc/vmware/esx.conf (default 32, 0)
- /vmkernel/module/ixgbe.o/options = "VMDQ=1,1 InterruptThrottleRate=3000,3000" (defaults 8,8 / 16000,16000)
- Installed 10GbE driver vmware-esx-drivers-net-ixgbe_400.2.0.62.4.8-1.0.4.164009.258233.iso
- Repartitioned data drive and backup drive for all mailserver VMs with AutoPart v1.6
- Used the fileserver harness patch "fileserver_functions.xml" to add delay to allow the KillLockMem tasks to complete successfully

Operating System Notes

- Microsoft Windows Server 2003 R2 Enterprise Edition Service Pack 2 on Windows-based VMs
- KB933360 was applied to Windows-based VMs
- KB958644 was applied to javaserver VMs
- SuSE Linux Enterprise Server 10 SP2 on Linux-based VMs

Software Notes

None

Client Notes

- Microsoft Windows Server 2003 R2 Enterprise Edition Service Pack 2
- TCP TOE chimney was disabled (default enabled)
- KB933360 was applied

Other Notes

The following parameters were altered from their default values in VMMARK.CONFIG

MailServer/DELAYTIME="10" (default 5)
JavaServer/DELAYTIME="35" (default 540)
Standby/DELAYTIME="10" (default 170)
WebServer/DELAYTIME="50" (default 180)
Database/DELAYTIME="75" (default 360)
FileServer/DELAYTIME="100" (default 450)
TILEDELAY=180 (default 600)

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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