

VMmark® 3.1.1 Results

Server Vendor & Model: Dell PowerEdge R760
Storage Vendor & Model: Dell EMC PowerVault ME4024
Hypervisor: VMware ESXi 8.0 GA, Build 20513097
Datacenter Management Software: VMware vCenter Server 8.0 GA, Build 20519528

**VMmark 3.1.1 Score =
18.78 @ 20 Tiles**

Number of Hosts: 2	Uniform Hosts [yes/no]: yes	Total sockets/cores/threads in test: 4/224/448
Tested By: Dell Technologies		Test Date: 12-12-2022
Performance Section Performance	Configuration Section Configuration	Notes Section Notes for Workload

Performance

	weathervane			weathervaneE			dvdstoreA			dvdstoreB			dvdstoreC			
TILE_0	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3573.19	0.99	0.67 0.00	565.97	0.99	0.61 0.23	905.60	1.23	914.34	625.20	1.25	1093.86	455.07	1.31	1211.26	1.15
p1	3556.97	0.99	0.71 0.00	566.42	0.99	0.40 0.19	912.30	1.24	905.57	632.02	1.26	1070.99	437.65	1.26	1202.93	1.14
p2	3537.00	0.98	0.65 0.00	558.84	0.98	0.47 0.15	905.90	1.23	916.06	647.20	1.29	1080.59	476.40	1.37	1204.99	1.16
TILE_1	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3577.90	0.99	0.61 0.00	565.67	0.99	0.59 0.22	933.65	1.27	832.98	630.95	1.26	964.03	455.82	1.31	1094.67	1.16
p1	3559.73	0.99	0.67 0.00	559.32	0.98	0.40 0.05	936.60	1.28	823.80	680.62	1.36	955.65	476.65	1.37	1080.57	1.18
p2	3546.31	0.99	0.65 0.00	555.26	0.97	0.48 0.15	919.20	1.25	853.97	647.05	1.29	1001.13	470.00	1.36	1112.81	1.16
TILE_2	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3580.43	1.00	0.54 0.00	563.07	0.98	0.34 0.07	903.17	1.23	940.19	623.25	1.25	1125.78	421.00	1.21	1300.95	1.13
p1	3572.12	0.99	0.60 0.00	560.37	0.98	0.51 0.16	888.98	1.21	987.43	630.55	1.26	1172.37	437.57	1.26	1324.52	1.13
p2	3553.45	0.99	0.59 0.00	560.07	0.98	0.41 0.15	896.58	1.22	965.94	608.33	1.22	1173.03	435.48	1.26	1342.01	1.12
TILE_3	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3564.29	0.99	0.49 0.00	567.71	0.99	0.59 0.21	930.70	1.27	851.12	644.55	1.29	1017.75	425.57	1.23	1150.77	1.15
p1	3550.33	0.99	0.60 0.00	563.80	0.99	0.41 0.10	914.23	1.24	888.20	663.00	1.32	1024.65	483.43	1.39	1153.56	1.17
p2	3542.06	0.98	0.60 0.00	559.77	0.98	0.46 0.11	922.88	1.26	852.13	642.48	1.28	1011.41	443.52	1.28	1147.89	1.15
TILE_4	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3581.51	1.00	0.59 0.00	563.51	0.98	0.47 0.19	907.58	1.24	930.60	626.20	1.25	1097.75	426.20	1.23	1269.94	1.13
p1	3568.35	0.99	0.55 0.00	560.88	0.98	0.38 0.10	891.67	1.21	966.12	633.12	1.26	1150.17	460.55	1.33	1292.60	1.15
p2	3558.01	0.99	0.60 0.00	559.29	0.98	0.51 0.20	900.95	1.23	957.17	614.00	1.23	1149.98	413.15	1.19	1352.23	1.12
TILE_5	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3580.62	1.00	0.51 0.00	563.29	0.98	0.39 0.13	937.55	1.28	821.15	655.20	1.31	973.76	457.00	1.32	1080.73	1.17

p1	3554.59	0.99	0.44 0.00	562.85	0.98	0.49 0.13	939.77	1.28	817.21	678.02	1.35	952.30	479.12	1.38	1065.72	1.18
p2	3544.21	0.99	0.47 0.00	559.95	0.98	0.39 0.08	943.40	1.28	816.65	659.42	1.32	969.97	452.95	1.31	1101.88	1.16
TILE_6	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3574.11	0.99	0.66 0.00	569.29	0.99	0.67 0.28	904.55	1.23	913.14	651.12	1.30	1070.45	453.95	1.31	1204.78	1.16
p1	3561.80	0.99	0.65 0.00	567.35	0.99	0.51 0.12	899.60	1.23	934.55	621.73	1.24	1111.71	451.77	1.30	1228.05	1.14
p2	3552.56	0.99	0.66 0.00	563.86	0.99	0.48 0.24	899.42	1.22	939.49	625.30	1.25	1110.27	427.48	1.23	1257.36	1.13
TILE_7	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3576.63	0.99	0.51 0.00	567.44	0.99	0.45 0.14	915.88	1.25	895.54	660.48	1.32	1054.97	456.00	1.31	1199.50	1.16
p1	3566.57	0.99	0.48 0.00	564.66	0.99	0.40 0.18	924.65	1.26	870.98	634.85	1.27	1057.48	438.25	1.26	1187.86	1.15
p2	3557.44	0.99	0.50 0.00	561.91	0.98	0.35 0.13	922.60	1.26	872.26	642.25	1.28	1032.42	458.75	1.32	1190.64	1.16
TILE_8	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3576.80	0.99	0.59 0.00	566.16	0.99	0.56 0.22	905.25	1.23	913.93	654.65	1.31	1076.23	477.68	1.38	1190.79	1.17
p1	3565.71	0.99	0.63 0.00	561.09	0.98	0.39 0.16	922.92	1.26	868.15	643.58	1.29	1036.55	441.02	1.27	1170.04	1.15
p2	3545.37	0.99	0.60 0.00	556.60	0.97	0.47 0.19	914.48	1.25	885.99	665.88	1.33	1021.68	459.55	1.33	1171.22	1.16
TILE_9	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3568.92	0.99	0.58 0.00	568.31	0.99	0.54 0.15	931.67	1.27	842.52	673.20	1.35	983.06	498.23	1.44	1083.44	1.19
p1	3555.52	0.99	0.60 0.00	567.62	0.99	0.37 0.16	947.65	1.29	801.25	660.20	1.32	947.27	433.57	1.25	1079.44	1.16
p2	3536.43	0.98	0.60 0.00	560.27	0.98	0.49 0.16	930.12	1.27	838.47	676.48	1.35	970.38	491.80	1.42	1097.74	1.18
TILE_10	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3584.27	1.00	0.49 0.00	567.47	0.99	0.38 0.16	916.67	1.25	899.79	632.27	1.26	1058.12	458.90	1.32	1188.99	1.16
p1	3572.64	0.99	0.49 0.00	566.37	0.99	0.40 0.18	911.95	1.24	911.05	627.42	1.25	1087.19	431.57	1.24	1238.36	1.14
p2	3558.88	0.99	0.50 0.00	563.85	0.99	0.44 0.15	895.38	1.22	950.65	640.67	1.28	1124.26	467.50	1.35	1244.23	1.15
TILE_11	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3583.39	1.00	0.52 0.00	569.00	0.99	0.41 0.10	935.75	1.27	820.84	652.58	1.30	970.77	475.88	1.37	1090.80	1.18
p1	3565.31	0.99	0.50 0.00	565.42	0.99	0.35 0.07	941.65	1.28	807.75	660.40	1.32	948.48	459.55	1.33	1071.75	1.17
p2	3557.08	0.99	0.52 0.00	562.53	0.98	0.43 0.15	927.45	1.26	850.88	673.12	1.34	972.98	493.50	1.42	1094.02	1.19
TILE_12	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3585.21	1.00	0.52 0.00	570.42	1.00	0.62 0.21	902.98	1.23	943.24	594.30	1.19	1149.75	420.85	1.21	1312.63	1.12
p1	3571.09	0.99	0.55 0.00	564.97	0.99	0.47 0.15	887.50	1.21	992.42	630.10	1.26	1172.09	435.80	1.26	1331.72	1.13
p2	3558.90	0.99	0.54 0.00	563.25	0.98	0.41 0.16	889.15	1.21	995.95	603.62	1.21	1209.06	426.90	1.23	1391.61	1.12
TILE_13	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3581.79	1.00	0.61 0.01	569.33	1.00	0.41 0.09	940.62	1.28	815.79	656.92	1.31	955.41	452.90	1.31	1096.69	1.17
p1	3566.16	0.99	0.63 0.01	566.43	0.99	0.50 0.14	937.95	1.28	825.66	677.92	1.35	958.88	475.55	1.37	1082.63	1.18
p2	3552.79	0.99	0.65 0.00	562.03	0.98	0.44 0.16	932.42	1.27	834.73	652.33	1.30	971.98	449.73	1.30	1115.76	1.16
TILE_14	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(nRTI MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3590.98	1.00	0.62 0.00	566.54	0.99	0.41 0.19	923.77	1.26	861.41	641.70	1.28	1024.27	442.90	1.28	1159.45	1.15

p1	3565.63	0.99	0.59 0.00	564.86	0.99	0.36 0.16	912.05	1.24	889.87	655.23	1.31	1044.04	484.48	1.40	1158.18	1.17
p2	3555.66	0.99	0.57 0.00	563.53	0.98	0.42 0.20	933.60	1.27	847.85	646.23	1.29	1003.63	444.00	1.28	1139.09	1.15
TILE_15	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3580.74	1.00	0.47 0.00	568.33	0.99	0.57 0.25	922.65	1.26	890.15	634.50	1.27	1074.76	432.38	1.25	1237.87	1.14
p1	3556.12	0.99	0.50 0.00	562.77	0.98	0.43 0.15	909.95	1.24	916.20	654.35	1.31	1066.65	474.30	1.37	1208.14	1.17
p2	3538.40	0.98	0.51 0.00	558.54	0.98	0.43 0.08	922.02	1.26	878.88	639.02	1.28	1042.81	416.60	1.20	1199.83	1.13
TILE_16	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3581.50	1.00	0.55 0.00	569.14	0.99	0.38 0.09	912.35	1.24	896.37	656.50	1.31	1053.78	454.90	1.31	1196.20	1.16
p1	3568.69	0.99	0.57 0.00	567.27	0.99	0.46 0.12	915.05	1.25	883.34	633.95	1.27	1050.23	456.20	1.32	1190.36	1.15
p2	3561.23	0.99	0.58 0.00	562.63	0.98	0.37 0.13	919.30	1.25	877.77	639.92	1.28	1042.02	437.55	1.26	1185.46	1.14
TILE_17	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3568.82	0.99	0.49 0.00	569.28	0.99	0.68 0.24	941.42	1.28	812.73	683.42	1.37	940.53	482.38	1.39	1058.28	1.19
p1	3557.90	0.99	0.52 0.00	569.95	1.00	0.70 0.26	948.83	1.29	802.07	658.08	1.31	953.53	482.68	1.39	1054.02	1.18
p2	3549.66	0.99	0.49 0.00	566.82	0.99	0.60 0.23	940.20	1.28	824.06	657.27	1.31	967.23	453.02	1.31	1102.53	1.17
TILE_18	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3572.71	0.99	0.61 0.00	561.46	0.98	0.32 0.09	896.12	1.22	955.50	666.90	1.33	1093.76	470.15	1.36	1250.38	1.17
p1	3561.13	0.99	0.61 0.00	560.66	0.98	0.43 0.22	914.52	1.25	896.91	605.77	1.21	1086.45	431.35	1.24	1227.52	1.13
p2	3551.90	0.99	0.60 0.00	559.42	0.98	0.47 0.13	907.88	1.24	914.33	650.20	1.30	1075.19	452.48	1.30	1222.75	1.15
TILE_19	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3575.62	0.99	0.62 0.00	567.92	0.99	0.70 0.28	920.33	1.25	875.05	666.60	1.33	1013.32	487.48	1.41	1139.30	1.18
p1	3556.69	0.99	0.66 0.00	562.48	0.98	0.42 0.12	932.98	1.27	842.43	652.92	1.30	979.46	448.77	1.29	1125.76	1.16
p2	3536.95	0.98	0.61 0.00	560.59	0.98	0.41 0.13	924.70	1.26	858.48	671.00	1.34	990.48	472.55	1.36	1109.38	1.17
p0_score:	23.18															
p1_score:	23.14															
p2_score:	23.04															

Infrastructure_Operations_Scores:	vMotion	SVMotion	XVMotion	Deploy
Completed_Ops_PerHour	29.00	27.00	22.00	11.50
Avg_Seconds_To_Complete	4.82	79.83	98.64	264.96
Failures	0.00	0.00	0.00	0.00
Ratio	1.12	1.50	1.22	1.44
Number_Of_Threads	1	1	1	1

Summary	Run_Is_Compliant	Turbo_Setting:0
	Number_Of_Compliance_Issues(0)*	Median_Phase(p1)
Unreviewed_VMmark3_Applications_Score	23.14	
Unreviewed_VMmark3_Infrastructure_Score	1.31	

Configuration

Virtualization Software	
Hypervisor Vendor, Product, Version, and Build / Availability Date (MM-DD-YYYY)	VMware ESXi 8.0 GA, Build 20513097 / 10-11-2022
Datacenter Management Software Vendor, Product, Version, and Build / Availability Date (MM-DD-YYYY)	VMware vCenter Server 8.0 GA, Build 20519528 / 10-11-2022
Supplemental Software	None
Servers	
Number of Servers in System Under Test (all subsequent fields in this section are per server)	2
Server Manufacturer and Model	Dell PowerEdge R760
Processor Vendor and Model	Intel(R) Xeon(R) Platinum 8480+
Processor Speed (GHz) / Turbo Boost Speed (GHz)	2.00GHz / 3.80 GHz
Total Sockets/Total Cores/Total Threads	2 Sockets / 112 Cores / 224 Threads
Primary CPU Cache	32 KB I + 48 KB D on chip per core
Secondary CPU Cache	2 MB I+D on chip per core
Other CPU Cache	105 MB I+D on chip per chip
BIOS Version	1.0.0
Memory Size (in GB, Number of DIMMs)	4096 GB, 16
Memory Type and Speed	256 GB 8Rx4 DDR5-4800 RDIMM
Disk Subsystem Type	FC SAN
Number of Disk Controllers	1
Disk Controller Vendors and Models	Dell BOSS-N1 Monolithic
Total Number of Physical Disks for Hypervisor	2

Disk Vendors, Models, Capacities, and Speeds	2xDell EC NVMe ISE 7400 RI M.2 480GB - RAID 1
Number of Host Bus Adapters	1
Host Bus Adapter Vendors and Models	Emulex LPe36002-M64-D 2-Port 64Gb Fibre Channel Adapter
Number of Network Controllers	1
Network Controller Vendors and Models	Intel Ethernet 100G 2P E810-C Adapter
Other Hardware	None
Other Software	None
Hardware Availability Date (MM-DD-YYYY)	2-15-2023
BIOS Availability Date (MM-DD-YYYY)	2-15-2023
Software Availability Date (MM-DD-YYYY)	10-11-2022
Network	
Network Switch Vendors and Models	1xDell EMC Z9432F-ON switch
Network Speed	1x100Gbps for Management, vMotion, Deploy and all Auction and Standby workload VMs 1x100Gbps for all other workload VMs
Primary Storage	
Storage Category	FC SAN
Storage Vendors, Models, and Firmware Versions	2xDell EMC PowerVault ME4024,Firmware GTS280R10-10
Storage Configuration Summary	FC SAN <ul style="list-style-type: none"> • 1x2TB for AuctionDB VMs • 1x2TB for AuctionLB VMs • 1x3TB for ElasticDB VMs • 1x8TB for AuctionNoSQL VMs • 1x15TB for other workload VMs • 1x1TB for deploy operations • 1x10TB for DS3DB VMs • 1x3TB for ElasticLB VMs • 1x1TB for svMotion and xvMotion infrastructure operations
Datacenter Management Server	
System Model	Dell PowerEdge R740xd
Processor Vendor and Model	Intel Xeon Platinum 8280 CPU
Processor Speed (GHz)	2.70

Total Sockets/Total Cores/Total Threads	2 Sockets / 56 Cores / 112 Threads
Memory Size (in GB, Number of DIMMs)	768,24
Network Controller(s) Vendors and Models	Broadcom 57414 25GbE Dual Port Adapter
Operating System, Version, Bitness, and Service Pack	VMware ESXi 7.0 U2a Build 17867351
Virtual Center VM Number of vCPUs	4
Virtual Center VM Virtual Memory (in GB)	21
Virtual Center VM Operating System, Version, Bitness, and Service Pack	VMware vCenter Server 8.0 GA, Build 20519528
Other Hardware	None
Other Software	None

Clients

Total Number of Virtual Clients / Virtual Client Hosts	21 / 3
System Model(s)	3xDell PowerEdge R740xd
Processor Vendor(s) and Model(s)	Intel Xeon Platinum 8280
Processor Speed(s) (GHz)	2.7GHz
Total Sockets/Total Cores/Total Threads	2 Sockets/56 Cores/112 Threads
Memory per Virtual Client Host	768GB
Network Controller(s) Vendors and Models	Broadcom 57414 25GbE Dual Port Adapter(vmnic4 and vmnic5)
Virtual Client Networking Notes	<ul style="list-style-type: none"> • vSwitch0 for Management, vMotion, Client VMs, Prime Client and vCenter Server at 25Gbps on vmnic4 and vmnic5 • vmk0 for Management on vSwitch0 • vmk1 for vMotion on vSwitch0
Virtual Client Storage Notes	All Virtual Clients are stored on Dell PowerVault ME4024 FC SAN storage
Other Hardware	None
Other Software	All the client hosts used VMware 7.0 U2a Build 17867351 for operating system

Security Mitigations

Vulnerability	CVE	Exploit Name	Public Vulnerability Name	Mitigated
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				Server Firmware	ESXi	Guest OS
Spectre	2017-5753	Variant 1	Bounds Check Bypass	N/A	Yes	Yes
Spectre	2017-5715	Variant 2	Branch Target Injection	Yes	Yes	Yes
Meltdown	2017-5754	Variant 3	Rogue Data Cache Load	N/A	Yes	Yes
Spectre-NG	2018-3640	Variant 3a	Rogue System Register Read	Yes	N/A	N/A
Spectre-NG	2018-3639	Variant 4	Speculative Store Bypass	N/A	Yes	Yes
Foreshadow	2018-3615	Variant 5	L1 Terminal Fault - SGX	N/A	N/A	N/A
Foreshadow-NG	2018-3620	Variant 5	L1 Terminal Fault - OS	N/A	N/A	Yes
Foreshadow-NG	2018-3646	Variant 5	L1 Terminal Fault - VMM	N/A	Yes	N/A

Notes for Workload

Template deployed with disk type: Thin

Virtualization Software Notes

- Logical CPU configuration changed for all multi-CPU VMs except for PrimeClient to 1 socket with multiple cores (default single core per socket)
- CPU and Memory shares set to high for all DS3DB, ElasticDB and ElasticLB VMs (default normal)
- CDROM removed from all VMs except PrimeClient,client and template VMs
- All memory reserved for DS3DB VMs (default non-reserved)
- CPU shares set to low for all Standby VMs (default normal)
- vSphere DRS Migration Threshold set to Fully Automated level 1
- sched.mem.pin set to TRUE for all DS3DB VMs (default false)
- Logging has been disabled for all workload VMs except Prime Client (default enabled)
- sched.mem.lpage.enable1GPage was set to TRUE for all DS3DB VMs

Advanced Settings

- Cpu.CreditAgePeriod = 1000 (default 3000)
- Cpu.HTWholeCoreThreshold = 0 (default 800)
- DataMover.HardwareAcceleratedInit = 0 (default 1)
- DataMover.HardwareAcceleratedMove = 0 (default 1)
- Disk.IdleCredit = 64 (default 32)
- Disk.ReqCallThreshold = 1 (default 8)
- Mem.CtlMaxPercent = 0 (default 65)
- Mem.ShareScanGHz = 0 (default 4)
- Net.MaxNetifTxQueueLen = 1000 (default 2000)
- Net.MaxPortRxQueueLen = 160 (default 80)
- Numa.LTermFairnessInterval = 0 (default 5)
- Numa.MigImbalanceThreshold = 57 (default 10)
- Numa.PageMigEnable = 0 (default 1)

- Numa.RebalancePeriod = 6000 (default 2000)
- Numa.SwapLoadEnable= 0 (default 1)
- Numa.SwapLocalityEnable= 0 (default 1)
- VMFS3.HardwareAcceleratedLocking = 0 (default 1)
- VMkernel.Boot.hyperthreadingMitigation = true (default false)
- UserVars.HostClientCEIPOptIn = 1 (default 0)
- Power.CpuPolicy = High Performance (default Balanced)
- LSOM.IsomEnableRebuildOnLSE = 2 (default 1)

Server Notes

Server BIOS Settings

- Hardware Prefetcher = Disabled (default enabled)
- DCU Streamer Prefetcher = Disabled (default enabled)
- DCU IP Prefetcher = Disabled (default enabled)
- LLC Dead Line Alloc = Disabled (default enabled)

Networking Notes

vSwitch Configuration

SUT cluster

- vSwitch0 for Management and vMotion and all Auction VMs,Standby VMs and template VM on vmnic4 at 100Gbps
- vmk0 connected to vSwitch0 for Management
- vmk1 connected to vSwitch0 used for vMotion
- vSwitch1 for all Elastic* VMs and DS3* VMs on vmnic5 at 100Gbps
- vSwitch0,vSwitch1 on both SUT Hosts had MTU set to 9000(default 1500)
- vmk0, vmk1, vmnic4 and vmnic5 on both SUT Hosts had MTU set to 9000(default 1500)

Client Cluster

- vSwitch0 for Management,vMotion,Client VMs,Prime Client and VMware vCenter Server on vmnic4 and vmnic5 at 25Gbps
- vmk0 for Management on vSwitch0
- vmk1 for vMotion on vSwitch0
- vSwitch0 on all client hosts had MTU set to 9000(default 1500)
- vmk0, vmk1, vmnic4 and vmnic5 on all Client Hosts had MTU set to 9000(default 1500)

Storage Notes

- Host OS installed on Dell EC NVMe ISE 7400 RI M.2 480GB - RAID 1
- Speed of the Emulex LPe36002-M64-D Fibre Channel Adapter used in SUTs is 16Gbps
- Path Selection Policy used for both SUT's Fiber Channel connectivity is Round Robin (default Most Recently Used)

First Dell EMC PowerVault ME4024 configured with Fiber Channel connectivity

- 10x Toshiba Model KPM5XRUG3T84 3.84TB SSD
- ME4024 Storage Controller-hardware version 8.1 ,firmware version GTS280R10-10
- LUNs AuctionDB ,AuctionLB ,Client and ElasticDB are configured as RAID10
- AuctionDB LUN used for AuctionDB VMs
- AuctionLB LUN used for AuctionLB VMs
- Client LUN used for Client VMs, Prime Client and VMware vCenter Server
- ElasticDB LUN used for ElasticDB VMs

Second Dell EMC PowerVault ME4024 configured with Fiber Channel connectivity

- 24x SAMSUNG Model MZILT3T8HBLSD3 3.8TB SSD
- ME4024 Storage Controller-hardware version 8.1 ,firmware version GTS280R10-10
- LUNs AuctionNoSQL ,Datastore ,Deploy ,DS3DB ,ElasticLB and svMotion are configured as RAID10
- AuctionNoSQL LUN used for AuctionNoSQL VMs
- Datastore LUN used for all other workload VMs
- Deploy LUN used for deploy operations
- DS3DB LUN used for DS3DB VMs
- ElasticLB LUN used for ElasticLB VMs
- svMotion LUN used for svMotion and xvMotion infrastructure operations

Datacenter Management Server Notes

None

Operating System Notes

SUT hosts used Dell customized ESXi 8.0 ISO (VMware-VMvisor-Installer-8.0.0-20513097.x86_64-Dell_Customized-A00.iso) for OS installation

Software Notes

None

Client Notes

The Client VMs were distributed across the client hosts as follows:

- ClientHost7:Client2, Client5, Client7, Client10, Client11, Client15, Client17, Prime Client
- ClientHost8:Client3, Client4, Client8, Client9, Client12, Client14, Client16, VMware vCenter Server
- ClientHost9:Client0, Client1, Client6, Client13, Client18, Client19

Client Host Advanced Settings:

/UserVars/HostClientCEIPOptIn = 1 (default 0)

Other Notes

Changes to VMmark3.properties file:

TileDelay=30 (default 60)

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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