

# VMmark<sup>®</sup> 4.0.1 Disclosure

**Server Vendor & Model: Dell PowerEdge R7725**  
**Storage Vendor & Model: Dell PowerStore 5000T**  
**Hypervisor: VMware ESXi 8.0 Update 3, Build 24022510**  
**Server Management Software: VMware vCenter Server 8.0 Update 3, Build 24022515**

**VMmark 4.0.1 Score =  
5.17 @ 5.8 Tiles**

Number of Hosts: 2	Uniform Hosts: yes	Total sockets/cores/threads in test: 4/768/1536
Tested By: Dell Technologies	Test Date: 09-17-2024	SUT Availability Date: 11-19-2024
<b>Performance Section</b> <a href="#">Performance</a>	<b>Configuration Section</b> <a href="#">Configuration</a>	<b>Notes Section</b> <a href="#">Notes for Workload</a>
<b>Virtual Machines Section</b> <a href="#">Virtual Machines</a>		

## Performance

TILE_0_Scores	WVAuctionVM	WVAuctionK8S	DVDStoreA	DVDStoreB	DVDStoreC	NoSQLBenchA	NoSQLBenchB	NoSQLBenchC	SocialNetwork	Standby	
p0	14102.70	9264.16	3160.57	2284.40	1653.92	62030.65	62027.72	62027.62	72.01	1.00	
p1	14098.43	9242.96	3156.88	2432.68	1895.53	57142.20	57139.93	57139.96	71.97	1.00	
p2	14080.02	9224.20	3151.43	2254.07	1644.55	52734.42	52734.28	52733.89	71.93	1.00	
TILE_0_Ratios	WVAuctionVM	WVAuctionK8S	DVDStoreA	DVDStoreB	DVDStoreC	NoSQLBenchA	NoSQLBenchB	NoSQLBenchC	SocialNetwork	Standby	Geo.Mean
p0	1.01	1.01	1.09	1.06	1.08	1.10	1.10	1.10	1.00	1.00	1.06
p1	1.01	1.00	1.09	1.13	1.24	1.01	1.01	1.01	1.00	1.00	1.05
p2	1.01	1.00	1.09	1.05	1.07	0.93	0.93	0.93	1.00	1.00	1.00
TILE_0_QoS	WVAuctionVM%	WVAuctionK8S%	DVDStoreA	DVDStoreB	DVDStoreC	NoSQLBenchA	NoSQLBenchB	NoSQLBenchC			
p0	0.58   0.05	0.42   0.00	273.26	283.92	285.11	0.54	0.54	0.54			
p1	0.65   0.29	0.40   0.00	277.69	292.48	283.00	0.59	0.59	0.59			
p2	0.72   0.27	0.40   0.01	283.85	297.84	291.19	0.61	0.61	0.61			
TILE_1_Scores	WVAuctionVM	WVAuctionK8S	DVDStoreA	DVDStoreB	DVDStoreC	NoSQLBenchA	NoSQLBenchB	NoSQLBenchC	SocialNetwork	Standby	
p0	14090.02	9255.86	3177.80	2378.60	1744.58	61427.42	61427.11	61424.97	72.00	1.00	
p1	14097.58	9208.80	3165.40	2389.15	1825.33	56708.64	56708.33	56708.48	71.83	1.00	
p2	14093.38	9230.18	3165.78	2384.45	1744.72	52658.02	52657.92	52657.33	71.74	1.00	
TILE_1_Ratios	WVAuctionVM	WVAuctionK8S	DVDStoreA	DVDStoreB	DVDStoreC	NoSQLBenchA	NoSQLBenchB	NoSQLBenchC	SocialNetwork	Standby	Geo.Mean
p0	1.01	1.01	1.10	1.11	1.14	1.09	1.09	1.09	1.00	1.00	1.07
p1	1.01	1.00	1.09	1.11	1.19	1.00	1.00	1.00	1.00	1.00	1.04
p2	1.01	1.00	1.09	1.11	1.14	0.93	0.93	0.93	1.00	1.00	1.01
TILE_1_QoS	WVAuctionVM%	WVAuctionK8S%	DVDStoreA	DVDStoreB	DVDStoreC	NoSQLBenchA	NoSQLBenchB	NoSQLBenchC			
p0	0.65   0.12	0.44   0.01	266.39	269.17	273.89	0.56	0.56	0.56			

<b>p1</b>	0.68   0.29	0.43   0.00	274.43	269.38	273.54	0.60	0.60	0.60			
<b>p2</b>	0.74   0.44	0.43   0.01	274.88	269.36	273.50	0.62	0.62	0.62			
<b>TILE_2_Scores</b>	<b>WVAuctionVM</b>	<b>WVAuctionK8S</b>	<b>DVDStoreA</b>	<b>DVDStoreB</b>	<b>DVDStoreC</b>	<b>NoSQLBenchA</b>	<b>NoSQLBenchB</b>	<b>NoSQLBenchC</b>	<b>SocialNetwork</b>	<b>Standby</b>	
<b>p0</b>	14106.89	9223.81	3186.72	2461.47	1832.33	62428.16	62425.89	62429.07	72.04	1.00	
<b>p1</b>	14085.98	9294.53	3164.80	2291.78	1739.28	58557.01	58557.65	58558.12	71.98	1.00	
<b>p2</b>	14131.16	9224.25	3163.35	2448.10	1820.55	55026.89	55025.48	55026.97	71.96	1.00	
<b>TILE_2_Ratios</b>	<b>WVAuctionVM</b>	<b>WVAuctionK8S</b>	<b>DVDStoreA</b>	<b>DVDStoreB</b>	<b>DVDStoreC</b>	<b>NoSQLBenchA</b>	<b>NoSQLBenchB</b>	<b>NoSQLBenchC</b>	<b>SocialNetwork</b>	<b>Standby</b>	<b>Geo.Mean</b>
<b>p0</b>	1.01	1.00	1.10	1.14	1.20	1.10	1.10	1.10	1.00	1.00	1.08
<b>p1</b>	1.01	1.01	1.09	1.07	1.14	1.04	1.04	1.04	1.00	1.00	1.05
<b>p2</b>	1.01	1.00	1.09	1.14	1.19	0.97	0.97	0.97	1.00	1.00	1.04
<b>TILE_2_QoS</b>	<b>WVAuctionVM%</b>	<b>WVAuctionK8S%</b>	<b>DVDStoreA</b>	<b>DVDStoreB</b>	<b>DVDStoreC</b>	<b>NoSQLBenchA</b>	<b>NoSQLBenchB</b>	<b>NoSQLBenchC</b>			
<b>p0</b>	0.61   0.10	0.43   0.01	262.35	273.13	271.51	0.54	0.54	0.55			
<b>p1</b>	0.66   0.15	0.43   0.00	270.37	276.24	276.26	0.59	0.59	0.59			
<b>p2</b>	0.71   0.38	0.48   0.01	275.91	278.77	276.54	0.60	0.60	0.60			
<b>TILE_3_Scores</b>	<b>WVAuctionVM</b>	<b>WVAuctionK8S</b>	<b>DVDStoreA</b>	<b>DVDStoreB</b>	<b>DVDStoreC</b>	<b>NoSQLBenchA</b>	<b>NoSQLBenchB</b>	<b>NoSQLBenchC</b>	<b>SocialNetwork</b>	<b>Standby</b>	
<b>p0</b>	14111.42	9252.77	3165.45	2453.95	1896.95	60955.26	60954.74	60955.40	72.06	1.00	
<b>p1</b>	14120.35	9266.73	3151.25	2290.60	1660.85	56759.91	56760.64	56759.54	71.99	1.00	
<b>p2</b>	14069.07	9220.40	3141.45	2454.12	1895.75	52841.39	52840.70	52841.10	71.99	1.00	
<b>TILE_3_Ratios</b>	<b>WVAuctionVM</b>	<b>WVAuctionK8S</b>	<b>DVDStoreA</b>	<b>DVDStoreB</b>	<b>DVDStoreC</b>	<b>NoSQLBenchA</b>	<b>NoSQLBenchB</b>	<b>NoSQLBenchC</b>	<b>SocialNetwork</b>	<b>Standby</b>	<b>Geo.Mean</b>
<b>p0</b>	1.01	1.01	1.09	1.14	1.24	1.08	1.08	1.08	1.00	1.00	1.08
<b>p1</b>	1.01	1.01	1.09	1.07	1.09	1.00	1.00	1.00	1.00	1.00	1.03
<b>p2</b>	1.00	1.00	1.08	1.14	1.24	0.94	0.94	0.94	1.00	1.00	1.03
<b>TILE_3_QoS</b>	<b>WVAuctionVM%</b>	<b>WVAuctionK8S%</b>	<b>DVDStoreA</b>	<b>DVDStoreB</b>	<b>DVDStoreC</b>	<b>NoSQLBenchA</b>	<b>NoSQLBenchB</b>	<b>NoSQLBenchC</b>			
<b>p0</b>	0.68   0.16	0.44   0.02	274.85	277.08	279.35	0.56	0.56	0.56			
<b>p1</b>	0.70   0.20	0.41   0.01	288.17	277.22	280.28	0.58	0.58	0.58			
<b>p2</b>	0.71   0.32	0.45   0.01	286.76	277.16	279.35	0.61	0.61	0.61			
<b>TILE_4_Scores</b>	<b>WVAuctionVM</b>	<b>WVAuctionK8S</b>	<b>DVDStoreA</b>	<b>DVDStoreB</b>	<b>DVDStoreC</b>	<b>NoSQLBenchA</b>	<b>NoSQLBenchB</b>	<b>NoSQLBenchC</b>	<b>SocialNetwork</b>	<b>Standby</b>	
<b>p0</b>	14113.73	9252.73	3183.28	2393.03	1821.05	61102.60	61105.99	61107.46	72.05	1.00	
<b>p1</b>	14088.21	9250.90	3167.93	2383.70	1741.15	57255.15	57256.40	57257.02	72.00	1.00	
<b>p2</b>	14083.34	9240.63	3160.18	2376.72	1802.80	53407.49	53408.87	53408.95	71.99	1.00	
<b>TILE_4_Ratios</b>	<b>WVAuctionVM</b>	<b>WVAuctionK8S</b>	<b>DVDStoreA</b>	<b>DVDStoreB</b>	<b>DVDStoreC</b>	<b>NoSQLBenchA</b>	<b>NoSQLBenchB</b>	<b>NoSQLBenchC</b>	<b>SocialNetwork</b>	<b>Standby</b>	<b>Geo.Mean</b>
<b>p0</b>	1.01	1.01	1.10	1.11	1.19	1.08	1.08	1.08	1.00	1.00	1.07
<b>p1</b>	1.01	1.01	1.09	1.11	1.14	1.01	1.01	1.01	1.00	1.00	1.04
<b>p2</b>	1.01	1.00	1.09	1.11	1.18	0.95	0.95	0.95	1.00	1.00	1.02
<b>TILE_4_QoS</b>	<b>WVAuctionVM%</b>	<b>WVAuctionK8S%</b>	<b>DVDStoreA</b>	<b>DVDStoreB</b>	<b>DVDStoreC</b>	<b>NoSQLBenchA</b>	<b>NoSQLBenchB</b>	<b>NoSQLBenchC</b>			

<b>p0</b>	0.74   0.20	0.43   0.00	264.95	262.63	273.36	0.55	0.55	0.54			
<b>p1</b>	0.64   0.23	0.44   0.01	273.48	268.70	278.82	0.58	0.58	0.58			
<b>p2</b>	0.70   0.22	0.42   0.00	278.29	274.41	285.51	0.62	0.62	0.61			
<b>TILE_5_Scores</b>	<b>WVAuctionVM</b>	<b>WVAuctionK8S</b>	<b>DVDStoreA</b>	<b>DVDStoreB</b>	<b>DVDStoreC</b>	<b>NoSQLBenchA</b>	<b>NoSQLBenchB</b>	<b>NoSQLBenchC</b>	<b>SocialNetwork</b>	<b>Standby</b>	
<b>p0</b>	N/A	9253.50	3179.25	2362.20	1721.85	79863.17	79866.83	79866.66	71.99	N/A	
<b>p1</b>	N/A	9221.96	3179.12	2368.72	1812.62	71528.18	71532.64	71532.25	71.96	N/A	
<b>p2</b>	N/A	9231.07	3161.43	2363.60	1721.58	64747.63	64747.69	64747.98	71.90	N/A	
<b>TILE_5_Ratios</b>	<b>WVAuctionVM</b>	<b>WVAuctionK8S</b>	<b>DVDStoreA</b>	<b>DVDStoreB</b>	<b>DVDStoreC</b>	<b>NoSQLBenchA</b>	<b>NoSQLBenchB</b>	<b>NoSQLBenchC</b>	<b>SocialNetwork</b>	<b>Standby</b>	<b>Geo.Mean</b>
<b>p0</b>	N/A	1.01	1.10	1.10	1.13	1.41	1.41	1.41	1.00	N/A	1.05
<b>p1</b>	N/A	1.00	1.10	1.10	1.18	1.27	1.27	1.27	1.00	N/A	1.02
<b>p2</b>	N/A	1.00	1.09	1.10	1.13	1.15	1.15	1.15	1.00	N/A	0.97
<b>TILE_5_QoS</b>	<b>WVAuctionVM%</b>	<b>WVAuctionK8S%</b>	<b>DVDStoreA</b>	<b>DVDStoreB</b>	<b>DVDStoreC</b>	<b>NoSQLBenchA</b>	<b>NoSQLBenchB</b>	<b>NoSQLBenchC</b>			
<b>p0</b>	N/A	0.38   0.00	273.55	284.40	295.20	0.40	0.40	0.40			
<b>p1</b>	N/A	0.39   0.00	272.14	281.54	287.00	0.41	0.41	0.41			
<b>p2</b>	N/A	0.38   0.01	274.67	288.00	297.67	0.42	0.42	0.42			
<b>p0_score:</b>	6.41										
<b>p1_score:</b>	6.23										
<b>p2_score:</b>	6.07										

<b>Infrastructure_Operations_Scores:</b>						<b>vMotion</b>	<b>SVMotion</b>	<b>XVMotion</b>	<b>Deploy</b>	
<b>Completed_Ops_PerHour</b>						29.00	13.00	14.00	10.50	
<b>Avg_Seconds_To_Complete</b>						2.57	78.81	49.93	303.05	
<b>Failures</b>						0.00	0.00	0.00	0.00	
<b>Ratio</b>						0.98	1.00	1.08	0.72	
<b>Number_Of_Threads</b>						1	1	1	1	
<b>Summary</b>							Run_Is_Compliant	Median_Phase(p1)		
<b>Unreviewed_VMmark4_Applications_Score</b>							6.23			
<b>Unreviewed_VMmark4_Infrastructure_Score</b>							0.94			
<b>Unreviewed_VMmark4_Score</b>							5.17 @ 5.8 Tiles			

## Configuration

<b>Virtualization Software</b>	
Hypervisor Vendor, Product, Version, and Build / Availability Date (MM-DD-YYYY)	VMware ESXi 8.0 Update 3, Build 24022510 / 06-25-2024

Server Management Software Vendor, Product, Version, and Build / Availability Date (MM-DD-YYYY)	VMware vCenter Server 8.0 Update 3, Build 24022515 / 06-25-2024
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Supplemental Software	None
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**Servers**

Number of Servers in System Under Test (all subsequent fields in this section are per Server)	2
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Server Manufacturer and Model	Dell PowerEdge R7725
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Processor Vendor and Model	AMD EPYC 9965
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Processor Speed (GHz) / Turbo Boost Speed (GHz)	2.25 GHz / 3.7 GHz
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Total Sockets/Total Cores/Total Threads	2 Sockets / 384 Cores / 768 Threads
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NUMA Nodes	2
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BIOS Version	0.2.4 [X-REV]
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Memory Size (in GB, Number of DIMMs)	Physical Memory (BIOS): 2304 GB Physical Memory (ESXi): 2304 GB Number of DIMMs: 24
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Memory Type and Speed	Location	Size	Speed	Max Speed	Rank	Type	Detail
	A1	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
	A2	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
	A3	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
	A4	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
	A5	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
	A6	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
	A7	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
	A8	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
	A9	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
	A10	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
	A11	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
	A12	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
	B1	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
	B2	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered
B3	96 GB	6000 MT/s	6400 MT/s	2	DDR5	Synchronous, Registered	



Drivers, Vendors, and Models	<b>vmnic3</b>	25 Gbps	Full	9000	229.2.62.0 /pkg 22.92.07.50	bnxtnet	Broadcom NetXtreme E-Series Quad-port 25Gb OCP 3.0 Ethernet Adapter
	<b>vmnic4</b>	25 Gbps	Full	9000	229.2.62.0 /pkg 22.92.07.50	bnxtnet	Broadcom NetXtreme E-Series Quad-port 25Gb OCP 3.0 Ethernet Adapter
	<b>vmnic5</b>	25 Gbps	Full	9000	229.2.62.0 /pkg 22.92.07.50	bnxtnet	Broadcom NetXtreme E-Series Quad-port 25Gb OCP 3.0 Ethernet Adapter

Number of Virtual Switches: 4

Switch	Ports	Configured Ports	MTU	Uplinks
<b>vSwitch0</b>	9216	128	9000	vmnic2, vmnic3
<b>vSwitch1</b>	9216	128	9000	vmnic1
<b>vSwitch2</b>	9216	128	9000	vmnic4, vmnic5
<b>vSwitch3</b>	9216	128	9000	vmnic0

  

Switch	Port Group	VLAN ID	Uplinks
<b>vSwitch0</b>	Management Network	0	vmnic2, vmnic3
<b>vSwitch0</b>	VMNetwork	0	vmnic2, vmnic3
<b>vSwitch1</b>	NVMe over TCP	0	vmnic1
<b>vSwitch2</b>	VMNetwork2	0	vmnic4, vmnic5
<b>vSwitch3</b>	vMotion	0	vmnic0

Device	Port Group/DVPort	MTU	TCP/IP Stack	Services
<b>vmk0</b>	Management Network	9000	Default	Management
<b>vmk1</b>	vMotion	9000	Default	vMotion
<b>vmk2</b>	NVMe over TCP	9000	Default	NVMeTCP

Physical Switch Vendors, Models, and Speeds: Dell PowerSwitch Z9264F-ON 100Gb

**Primary Storage**

Storage Category: NVMe over TCP

Datstores	Type	Size	Storage Device
<b>Deploy</b>	VMFS-6	2.2 TB	NVMe TCP Disk
<b>OSDATA-66da37ca-bc7dd97c-4b27-00620b21fc50</b>	VMFSOS	128.6 GB	Local NVMe Disk
<b>Tile0</b>	VMFS-6	3.3 TB	NVMe TCP Disk
<b>Tile1</b>	VMFS-6	3.3 TB	NVMe TCP Disk
<b>Tile2</b>	VMFS-6	3.3 TB	NVMe TCP Disk
<b>Tile3</b>	VMFS-6	3.3 TB	NVMe TCP Disk
<b>Tile4</b>	VMFS-6	3.3 TB	NVMe TCP Disk
<b>Tile5</b>	VMFS-6	3.3 TB	NVMe TCP Disk
<b>svmotion</b>	VMFS-6	2.2 TB	NVMe TCP Disk

	xvmotion		VMFS-6	2.2 TB	NVMe TCP Disk					
Number of Storage Devices	11									
Storage Device Names, Sizes, Types, Vendors, Models, and Revisions	<b>Storage Device</b>	<b>Size</b>	<b>Type</b>	<b>Vendor</b>	<b>Model</b>	<b>Revision</b>	<b>Path Selection Policy</b>	<b>Path Selection Policy Config</b>	<b># Working Paths</b>	
	NVMe TCP Disk	2.2 TB	Direct-Access	NVMe	dellemc-powerstore	3.6.0.0	LB-IOPS	iops=1	1	
	NVMe TCP Disk	2.2 TB	Direct-Access	NVMe	dellemc-powerstore	3.6.0.0	LB-IOPS	iops=1	1	
	NVMe TCP Disk	2.2 TB	Direct-Access	NVMe	dellemc-powerstore	3.6.0.0	LB-IOPS	iops=1	1	
	Local NVMe Disk (Boot Device)	3.2 TB	Direct-Access	NVMe	Dell NVMe PM1745 MU E3.S 3.2TB	1.0.1	FIXED	preferred=none	1	
	NVMe TCP Disk	3.3 TB	Direct-Access	NVMe	dellemc-powerstore	3.6.0.0	LB-IOPS	iops=1	1	
	NVMe TCP Disk	3.3 TB	Direct-Access	NVMe	dellemc-powerstore	3.6.0.0	LB-IOPS	iops=1	1	
	NVMe TCP Disk	3.3 TB	Direct-Access	NVMe	dellemc-powerstore	3.6.0.0	LB-IOPS	iops=1	1	
	NVMe TCP Disk	3.3 TB	Direct-Access	NVMe	dellemc-powerstore	3.6.0.0	LB-IOPS	iops=1	1	
	NVMe TCP Disk	3.3 TB	Direct-Access	NVMe	dellemc-powerstore	3.6.0.0	LB-IOPS	iops=1	1	
	NVMe TCP Disk	3.3 TB	Direct-Access	NVMe	dellemc-powerstore	3.6.0.0	LB-IOPS	iops=1	1	
How Datastores Map to Storage Devices	See detailed storage notes									
VMware vSAN Configuration (if used)	None									
RAID Configuration (if used)	None									
<b>Server Management</b>										
VMware vCenter Server Number of vCPUs	8									
VMware vCenter Server Virtual Memory (in GB)	30									
<b>Clients</b>										
Total Client VMs (including Prime Client)	7									
Number of Client Hosts (all subsequent fields in this section are per Client Host)	2									
System Model(s)	<ul style="list-style-type: none"> <li>Client Host 1: Dell PowerEdge R7625</li> <li>Client Host 2: Dell PowerEdge R7625</li> </ul>									
Processor Vendor(s) and Model(s)	<ul style="list-style-type: none"> <li>Client Host 1: AMD EPYC 9754</li> <li>Client Host 2: AMD EPYC 9754</li> </ul>									

Processor Speed(s) (GHz)	<ul style="list-style-type: none"> <li>Client Host 1: 2.25 GHz</li> <li>Client Host 2: 2.25 GHz</li> </ul>																																																																																					
Total Sockets/Total Cores/Total Threads	<table border="1"> <thead> <tr> <th>Client Host</th> <th>Sockets</th> <th>Cores</th> <th>Threads</th> </tr> </thead> <tbody> <tr> <td>Client Host 1</td> <td>2</td> <td>256</td> <td>512</td> </tr> <tr> <td>Client Host 2</td> <td>2</td> <td>256</td> <td>512</td> </tr> <tr> <td><b>Total</b></td> <td><b>4</b></td> <td><b>512</b></td> <td><b>1024</b></td> </tr> </tbody> </table>						Client Host	Sockets	Cores	Threads	Client Host 1	2	256	512	Client Host 2	2	256	512	<b>Total</b>	<b>4</b>	<b>512</b>	<b>1024</b>																																																																
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Client Host 2	vSwitch0	9216	128	9000	vmnic4																																																																																	
	vSwitch1	9216	128	9000	vmnic5																																																																																	
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		<b>vSwitch0</b>	Management Network	0	vmnic4	
	<b>Client Host 1</b>	<b>vSwitch0</b>	VMNetwork	0	vmnic4	
		<b>vSwitch1</b>	NVMe over TCP	0	vmnic5	
		<b>vSwitch2</b>	VAAI	0	vmnic0	
		<b>vSwitch3</b>	VMNetwork2	0	vmnic2, vmnic3	
		<b>vSwitch0</b>	Management Network	0	vmnic4	
	<b>Client Host 2</b>	<b>vSwitch0</b>	VMNetwork	0	vmnic4	
		<b>vSwitch1</b>	NVMe over TCP	0	vmnic5	
		<b>vSwitch2</b>	VMNetwork2	0	vmnic2, vmnic3	
VMkernel Network Adapters, Port Groups, MTUs, TCP/IP Stacks, and Services	<b>Client Host</b>	<b>Device</b>	<b>Port Group/DVPort</b>	<b>MTU</b>	<b>TCP/IP Stack</b>	<b>Services</b>
	<b>Client Host 1</b>	<b>vmk0</b>	Management Network	9000	Default	Management
		<b>vmk1</b>	NVMe over TCP	9000	Default	NVMeTCP
	<b>Client Host 2</b>	<b>vmk0</b>	Management Network	9000	Default	Management
		<b>vmk1</b>	NVMe over TCP	9000	Default	NVMeTCP
Client Storage Notes	See Client Notes Section					
Other Hardware	None					
Other Software	VMware ESXi 8.0 Update 3, Build 24022510					

## Notes for Workload

Template deployed with disk type: Thick Eager

### Virtualization Software Notes

- vSphere DRS Enabled
- vSphere DRS Automation Level set to Fully Automated
- vSphere DRS Migration Threshold set to 2
- Logical CPU layout changed for all multi-CPU VMs to 1 socket with multiple cores (default single core per socket) except Prime Client, Template, Client and AuctionK\* VMs
- Logging was disabled for all VMs except Prime Client (default enabled)
- All DS35DB VMs had CPU shares set to High (default Normal)
- All DS35DB VMs had Memory shares set to High (default Normal)
- All memory reserved (LockedToMax) for all DS35DB VMs
- All Standby VMs had CPU shares set to Low (default Normal)
- sched.mem.lpage.enable1GPage set to TRUE for all DS35DB VMs (default FALSE)
- CD/DVD device was removed from all VMs except Prime Client (default present)

SUT Host ESXi Advanced Settings:

Advanced Setting	Host 1	Host 2	Default
Cpu.CreditAgePeriod	1000	1000	3000

<b>Cpu.HTWholeCoreThreshold</b>	0	0	800
<b>DataMover.HardwareAcceleratedInit</b>	0	0	1
<b>DataMover.HardwareAcceleratedMove</b>	0	0	1
<b>Disk.IdleCredit</b>	64	64	32
<b>Disk.ReqCallThreshold</b>	1	1	8
<b>Mem.CtlMaxPercent</b>	0	0	65
<b>Mem.ShareScanGHZ</b>	0	0	4
<b>Numa.LTermFairnessInterval</b>	0	0	5
<b>Numa.LocalityWeightActionAffinity</b>	0	0	130
<b>Numa.MigImbalanceThreshold</b>	57	57	10
<b>Numa.PageMigEnable</b>	0	0	1
<b>Numa.RebalancePeriod</b>	60000	60000	2000
<b>Numa.SwapLoadEnable</b>	0	0	1
<b>Numa.SwapLocalityEnable</b>	0	0	1
<b>Power.CpuPolicy</b>	Performance	Performance	Balanced
<b>UserVars.HostClientCEIPOptIn</b>	2	2	0
<b>UserVars.SuppressShellWarning</b>	1	1	0

SUT Host ESXi Module Options:

<b>Module</b>	<b>Host 1</b>	<b>Host 2</b>	<b>Default</b>
<b>tcpip4</b>	ipv6=1	ipv6=1	ipv6=1

## Server Notes

Server BIOS Settings:

- System Profile Settings : Performance (default Performance per Watt(OS))
- Thermal Profile : Max Performance (default Default Thermal Profile Settings)
- Multi-segment Enable : Disabled (default Enabled)

## Networking Notes

SUTs:

- vSwitch0 : Management Network (vmk0) and vMotion (vmk1) using vmnic0
- vSwitch1 : NVMe over TCP (vmk2) using vmnic 1
- vSwitch2 : VMNetwork2 for VM traffic using vmnic2, vmnic3, vmnic4 and vmnic5  
All vSwitches vmk0,vmk1,vmk2 and vmnic0-vmnic5 set to MTU 9000

ClientHost1:

- vSwitch0 : Management Network (vmk0) and VMNetwork using vmnic4
- vSwitch1 : NVMe over TCP (vmk1) using vmnic 5
- vSwitch2 : VAAI to connect to PowerStore using vmnic0

- vSwitch3 : VMNetwork2 using vmnic2 and vmnic3  
All vSwitches (except vSwitch2) vmk0, vmk1 and vmnic0, vmnic2-vmnic5 set to MTU 9000

ClientHost2:

- vSwitch0 : Management Network (vmk0) and VMNetwork using vmnic4
- vSwitch1 : NVMe over TCP (vmk2) using vmnic 5
- vSwitch2 : VMNetwork2 using vmnic2 and vmnic3  
All vSwitches, vmk0, vmk1 and vmnic2-vmnic5 set to MTU 9000

## Storage Notes

- Primary Storage : Dell PowerStore 5000T, Software Version :3.6.0.0, Build 2145637
- Drives used in Dell PowerStore 5000T : 16 x 7.7TB NVMe SSD + 5 x 3.84TB NVMe SSD
- NVMe over TCP was used for connectivity to the LUNs in Powerstore 5000T
- Claim rules were used to change the Path Selection Policy to LB-IOPS and iops=1
- Template was located on the Deploy Datastore which was created on the PowerStore for Deploy operations (Deploy : 2TB)
- On both SUT hosts Dell Customized VMware ESXi 8.0 Update 3 was installed on Dell NVMe PM1745 MU E3.S 3.2TB
- On both Client hosts, VMware ESXi 8.0 Update 3 was installed on Dell NVMe PE8010 RI M.2 960GB (RAID 1)

## Server Management Notes

VMware vCenter Server 8.0 Update 3, Build 24022515 was hosted as a VM on ClientHost1

## Operating System Notes

SUT Host ESXi Image Profile: DEL-ESXi\_803.24022510-X71

## Software Notes

None

## Client Notes

- vSphere DRS Disabled

Client Host BIOS settings:

- L2 Prefetcher : Disabled (default Enabled)
- L2 Up/Down Prefetcher : Disabled (default Enabled)
- System Profile Settings : Performance (default Performance per Watt(OS))
- Thermal Profile : Max Performance (default Default Thermal Profile Settings)

Client Host ESXi Advanced Settings:

Advanced Setting	Host 1	Host 2	Default
Cpu.CreditAgePeriod	1000	1000	3000
Cpu.HTWholeCoreThreshold	0	0	800
DataMover.HardwareAcceleratedInit	0	0	1











SocialNetwork3	36	36	16384	TRUE	FALSE	Removed	0	Unlimited	normal	0	Unlimited	normal	FALSE	FALSE	normal	Tile3	VMNetwork2	17	12325
SocialNetwork4	36	36	16384	TRUE	FALSE	Removed	0	Unlimited	normal	0	Unlimited	normal	FALSE	FALSE	normal	Tile4	VMNetwork2	17	12325
SocialNetwork5	36	36	16384	TRUE	FALSE	Removed	0	Unlimited	normal	0	Unlimited	normal	FALSE	FALSE	normal	Tile5	VMNetwork2	17	12325
<b>VM</b>	<b>vCPUs</b>	<b>Cores Per Socket</b>	<b>Memory (MB)</b>	<b>Sync Time</b>	<b>Logging</b>	<b>CD/DVD</b>	<b>CPU Res</b>	<b>CPU Limit</b>	<b>CPU Shares</b>	<b>Mem Res</b>	<b>Mem Limit</b>	<b>Mem Shares</b>	<b>Mem Pin</b>	<b>Mem 1G Page</b>	<b>Disk Shares</b>	<b>Datastore</b>	<b>Port Group</b>	<b>vHW Version</b>	<b>Tools Version</b>
Standby0	1	1	2048	TRUE	FALSE	Removed	0	Unlimited	low	0	Unlimited	normal	FALSE	FALSE	normal	Tile0	VMNetwork2	17	12325
Standby1	1	1	2048	TRUE	FALSE	Removed	0	Unlimited	low	0	Unlimited	normal	FALSE	FALSE	normal	Tile1	VMNetwork2	17	12325
Standby2	1	1	2048	TRUE	FALSE	Removed	0	Unlimited	low	0	Unlimited	normal	FALSE	FALSE	normal	Tile2	VMNetwork2	17	12325
Standby3	1	1	2048	TRUE	FALSE	Removed	0	Unlimited	low	0	Unlimited	normal	FALSE	FALSE	normal	Tile3	VMNetwork2	17	12325
Standby4	1	1	2048	TRUE	FALSE	Removed	0	Unlimited	low	0	Unlimited	normal	FALSE	FALSE	normal	Tile4	VMNetwork2	17	12325
Standby5	1	1	2048	TRUE	FALSE	Removed	0	Unlimited	low	0	Unlimited	normal	FALSE	FALSE	normal	Tile5	VMNetwork2	17	12325
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VMmark-4.0.1-208	4	1	32768	TRUE	FALSE	Removed	0	Unlimited	normal	0	Unlimited	normal	FALSE	FALSE	normal	Deploy	VMNetwork2	17	12325

### Client Host Virtual Machines

VM	vCPUs	Cores Per Socket	Memory (MB)	Sync Time	Logging	CD/DVD	CPU Res	CPU Limit	CPU Shares	Mem Res	Mem Limit	Mem Shares	Mem Pin	Mem 1G Page	Disk Shares	Datastore	Port Group	vHW Version	Tools Version
Client0	64	1	98304	TRUE	FALSE	Removed	0	Unlimited	normal	0	Unlimited	normal	FALSE	FALSE	normal	Client_Datastore	VMNetwork2	17	12325
Client1	64	1	98304	TRUE	FALSE	Removed	0	Unlimited	normal	0	Unlimited	normal	FALSE	FALSE	normal	Client_Datastore	VMNetwork2	17	12325
Client2	64	1	98304	TRUE	FALSE	Removed	0	Unlimited	normal	0	Unlimited	normal	FALSE	FALSE	normal	Client_Datastore	VMNetwork2	17	12325
Client3	64	1	98304	TRUE	FALSE	Removed	0	Unlimited	normal	0	Unlimited	normal	FALSE	FALSE	normal	Client_Datastore	VMNetwork2	17	12325
Client4	64	1	98304	TRUE	FALSE	Removed	0	Unlimited	normal	0	Unlimited	normal	FALSE	FALSE	normal	Client_Datastore	VMNetwork2	17	12325
Client5	64	1	98304	TRUE	FALSE	Removed	0	Unlimited	normal	0	Unlimited	normal	FALSE	FALSE	normal	Client_Datastore	VMNetwork2	17	12325
Prime Client	4	1	32768	TRUE	TRUE	Present	0	Unlimited	normal	0	Unlimited	normal	FALSE	FALSE	normal	Client_Datastore	VMNetwork, VMNetwork2	17	12325
VMware vCenter Server	8	1	30720	FALSE	TRUE	Present	0	Unlimited	normal	0	Unlimited	normal	FALSE	FALSE	normal	Client_Datastore	VMNetwork, VMNetwork, VAAI	10	12389

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