

VMmark® 3.0 Results

Vendor and Hardware Platform: Fujitsu Server PRIMERGY RX2540 M4
Virtualization Platform: VMware ESXi 6.5.0b Build 5146846
VMware vCenter Server : VMware vCenter Server 6.5.0a Build 4944578

VMmark V3.0 Server and Storage PPKW Score =
3.6750 @ 8 Tiles

Number of Hosts: 2	Uniform Hosts [yes/no]: yes	Total sockets/cores/threads in test: 4/112/224
Tested By: Fujitsu		Test Date: 12-26-2017
Performance Section Performance	Configuration Section Configuration	Notes Section Notes for Workload

Performance

	weathervane			weathervaneE			dvdstoreA			dvdstoreB			dvdstoreC			
TILE_0	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3600.79	1.00	0.43 0.00	573.95	1.00	0.71 0.70	981.65	1.34	739.14	710.40	1.42	875.74	493.40	1.42	1015.49	1.22
p1	3601.05	1.00	0.44 0.00	571.54	1.00	0.57 0.59	985.05	1.34	739.79	689.60	1.38	881.61	496.27	1.43	1008.52	1.21
p2	3601.17	1.00	0.41 0.00	571.74	1.00	0.66 0.64	982.08	1.34	740.30	690.70	1.38	885.93	468.93	1.35	1034.27	1.20
TILE_1	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3603.82	1.00	0.40 0.00	576.16	1.01	0.59 0.73	981.45	1.34	730.56	715.52	1.43	852.95	525.10	1.51	970.69	1.24
p1	3597.43	1.00	0.39 0.00	573.68	1.00	0.80 0.53	994.00	1.35	699.26	700.30	1.40	830.27	486.52	1.40	955.08	1.22
p2	3606.49	1.00	0.38 0.00	571.71	1.00	0.80 0.61	989.48	1.35	721.09	716.90	1.43	837.95	503.10	1.45	969.85	1.23
TILE_2	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3596.49	1.00	0.38 0.00	573.85	1.00	0.61 0.53	1113.70	1.52	459.46	795.77	1.59	542.33	596.62	1.72	596.78	1.33
p1	3600.33	1.00	0.37 0.00	573.14	1.00	0.57 0.55	1112.20	1.51	452.32	801.27	1.60	522.89	569.65	1.64	577.89	1.32
p2	3599.84	1.00	0.37 0.00	571.81	1.00	0.53 0.55	1101.22	1.50	473.73	814.67	1.63	559.06	610.85	1.76	615.57	1.34
TILE_3	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3602.95	1.00	0.42 0.00	574.75	1.00	0.67 0.70	1064.90	1.45	544.53	761.73	1.52	641.04	534.73	1.54	718.05	1.28
p1	3602.20	1.00	0.40 0.00	573.40	1.00	0.84 0.64	1058.75	1.44	562.10	779.15	1.56	648.13	560.38	1.62	726.67	1.29
p2	3594.83	1.00	0.38 0.00	572.86	1.00	0.98 0.78	1072.50	1.46	537.46	763.20	1.52	620.31	567.67	1.64	683.38	1.30
TILE_4	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3597.76	1.00	0.43 0.00	573.32	1.00	0.74 0.70	972.17	1.32	766.55	676.20	1.35	918.60	466.80	1.35	1037.54	1.19
p1	3596.27	1.00	0.44 0.00	573.50	1.00	0.84 0.84	964.65	1.31	785.64	690.70	1.38	937.75	508.18	1.47	1055.98	1.22
p2	3602.09	1.00	0.39 0.00	573.19	1.00	0.99 0.67	972.15	1.32	773.45	671.12	1.34	938.38	464.82	1.34	1063.66	1.19
TILE_5	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM

p0	3603.30	1.00	0.33 0.00	572.78	1.00	0.61 0.45	1063.72	1.45	555.24	786.45	1.57	643.84	559.77	1.61	715.41	1.30
p1	3598.96	1.00	0.35 0.00	571.98	1.00	0.54 0.41	1060.85	1.44	568.48	751.67	1.50	669.36	551.60	1.59	745.03	1.28
p2	3602.35	1.00	0.34 0.00	573.38	1.00	0.74 0.62	1072.60	1.46	535.39	765.73	1.53	623.56	539.50	1.56	701.52	1.28
TILE_6	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3606.60	1.00	0.49 0.00	574.00	1.00	0.66 0.81	1090.10	1.48	490.07	808.30	1.61	564.60	612.85	1.77	621.97	1.34
p1	3605.40	1.00	0.52 0.00	572.70	1.00	0.54 0.71	1091.88	1.49	485.20	759.80	1.52	564.22	559.58	1.61	618.94	1.30
p2	3599.76	1.00	0.49 0.00	573.16	1.00	0.65 0.50	1077.67	1.47	518.33	799.05	1.60	598.86	575.02	1.66	654.83	1.31
TILE_7	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(nRT MaxPctF)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	Actual	Ratio	QoS(ms)	GM
p0	3600.14	1.00	0.42 0.00	574.76	1.00	0.56 0.54	979.00	1.33	745.97	703.48	1.41	901.86	498.98	1.44	998.89	1.22
p1	3604.26	1.00	0.43 0.00	574.16	1.00	0.45 0.37	977.15	1.33	752.31	656.27	1.31	904.66	467.88	1.35	1041.06	1.19
p2	3597.06	1.00	0.44 0.00	571.10	1.00	0.71 0.48	960.30	1.31	793.74	691.80	1.38	938.37	507.30	1.46	1053.17	1.21
p0_score:	10.12															
p1_score:	10.03															
p2_score:	10.06															

Infrastructure_Operations_Scores:	vMotion	SVMotion	XVMotion	Deploy
Completed_Ops_PerHour	28.50	28.00	21.00	11.50
Avg_Seconds_To_Complete	6.45	78.40	105.47	280.19
Failures	0.00	0.00	0.00	0.00
Ratio	1.10	1.56	1.17	1.44
Number_Of_Threads	1	1	1	1

PTD_Summary:							
Number_of_PTD_Daemons	2						
Number_of_PTD_Phases	3						
PTD_Phase_Timing	2400secs						
PtdTiming:	ptd0	ptd1					
p0	-60	-60					
p1	-60	-60					
p2	-60	-60					
PTD_Results:							
p0	Target	Avg_Watts	Avg_Volts	Avg_Amps	Avg_PF	Samples	UnCert%
ptd0	EXT_STOR	923.09	203.04	4.62	0.98	2399.00	0.00
ptd1	SERVER	1331.67	203.45	6.57	1.00	2399.00	0.00
p1	Target	Avg_Watts	Avg_Volts	Avg_Amps	Avg_PF	Samples	UnCert%

ptd0	EXT_STOR	924.66	202.98	4.63	0.98	2400.00	0.00
ptd1	SERVER	1335.71	203.40	6.59	1.00	2400.00	0.00
p2	Target	Avg_Watts	Avg_Volts	Avg_Amps	Avg_PF	Samples	UnCert%
ptd0	EXT_STOR	925.12	203.63	4.62	0.98	2400.00	0.00
ptd1	SERVER	1336.48	204.02	6.58	1.00	2400.00	0.00
Summary		Run_Is_Compliant				Turbo_Setting:0	
		Number_Of_Compliance_Issues(0)*				Median_Phase(p2)	
Unreviewed_VMmark3_Avg_Watts		2261.59					
Unreviewed_VMmark3_Applications_Score		10.06					
Unreviewed_VMmark3_Infrastructure_Score		1.30					
Unreviewed_VMmark3_Score		8.31					
Unreviewed_VMmark3_PPKW		3.6750					

Configuration

PTD Configuration	
Number of Power Meters	2
Power Meter Vendors and Models	2 x Hioki-3336
Power Meter PTD Target(s) (SERVER/EXT_STOR)	SERVER, EXT_STOR
Power Meter Connection Type(s) (Eth/GPIB/Serial/USB)	USB
Power Meter Calibration Date(s) (MM-DD-YYYY)	01-26-2017, 01-31-2017
Power Meter Calibration Info (Calibrated By/Duration)	HIOKI E.E. CORPORATION./ one year / 2017H010228, 2017H010227
Power Meter(s) Volt/Amp Range	300 / 10, 300 / 10
PTD Client Configuration	
Number of Power Meter Clients	2 (The Prime client served as both power meter clients)
System Model(s)	PrimeClient, details in client configuration section
Processor Vendor(s) and Model(s)	PrimeClient, details in client configuration section
Processor Speed(s) (GHz)	PrimeClient, details in client configuration section
Total Sockets/Total Cores/Total Threads	PrimeClient, details in client configuration section
Memory Per Power Meter Client	PrimeClient, details in client configuration section
Network Controller(s) Vendors and Models	PrimeClient, details in client configuration section
Operating System, Version, and Service Pack	PrimeClient, details in client configuration section
Other Hardware	2 x BUFFALO BSUSRC0605BS USB2.0 > 1 x Serial
Other Software	None

Configuration

Virtualization Software	
Hypervisor Vendor, Product, Version, and Build / Availability Date (MM-DD-YYYY)	VMware ESXi 6.5.0b, Build 5146846 / 03-09-2017
Datacenter Management Software Vendor, Product, Version, and Build / Availability Date (MM-DD-YYYY)	VMware vCenter Server 6.5.0a, Build 4944578 / 02-02-2017
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	Fujitsu Server PRIMERGY RX2540 M4
Processor Vendor and Model	Intel Xeon Platinum 8180
Processor Speed (GHz)	2.5
Total Sockets/Total Cores/Total Threads	2 Sockets / 56 Cores / 112 Threads
Primary CPU Cache	32 KB I + 32 KB D on chip per core
Secondary CPU Cache	1 MB I+D on chip per core
Other CPU Cache	38.5 MB I+D on chip per chip
BIOS Version	V5.0.0.12 R1.7.0 for D3384-A1x
Memory Size (in GB, Number of DIMMs)	768, 24
Memory Type and Speed	32GB 2Rx4 DDR4 2666MHz RDIMM
Disk Subsystem Type	FC SAN
Number of Disk Controllers	1
Disk Controller Vendors and Models	Fujitsu PRAID EP400i
Total Number of Physical Disks for Hypervisor	1
Disk Vendors, Models, Capacities, and Speeds	INTEL, DC S3520, 240GB, SATA 3.0 6Gb/S
Number of Host Bus Adapters	2

Host Bus Adapter Vendors and Models	Emulex LightPulse LPe31002-M6 2-Port 16Gb
Number of Network Controllers	3
Network Controller Vendors and Models	2 x Emulex OneConnect Oce14000 Dual Port 10GbE Adapter Intel I350 Dual Port 1GbE Adapter
Other Hardware	None
Other Software	None
Hardware Availability Date (MM-DD-YYYY)	07-12-2017
BIOS Availability Date (MM-DD-YYYY)	07-25-2017
Software Availability Date (MM-DD-YYYY)	03-09-2017
Network	
Network Switch Vendors and Models	1 x Fujitsu SR-X324T2 1 x Fujitsu ET-7648BFERA-FOS
Network Speed	1Gbps for SUT management, 10Gbps for VMotion, 10Gbps for Clients and VMs
Storage	
Array Vendors, Models, and Firmware Versions	3 x Fujitsu Server PRIMERGY RX2540 M2, Firmware V5.0.0.11 R1.13.0 for D3289-B1x
Fibre Channel Switch Vendors and Models	Brocade 6510
Disk Space Used	16TB
Array Cache Size	1GB
Total Number of Physical Disks Used	3 x SAS-SSD(1 per Storage Server OS), 9 x PCIe-SSD
Total Number of Enclosures/Pods/Shelves Used	3
Number of Physical Disks Used per Enclosure/Pod/Shelf	Enclosure(RX2540 M2): 1 x SAS-SSD and 3 x PCIe-SSD (3 total)
Total Number of Storage Groups Used	0
Number of LUNs Used	36
LUN Size and Number of Disks Per LUN	Details in section Storage Notes
RAID Type	RAID 0 for OS drives
Number of Members per RAID Set	1

Disk Vendors, Models, and Speeds	3 x Toshiba PX02SMF040 400GB SAS SSD 3 x Fusion ioMemory PX600 1.3TB PCIe SSD 6 x Fusion ioMemory PX600 2.6TB PCIe SSD
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Datacenter Management Server

System Model	Fujitsu Server PRIMERGY RX2530 M2
Processor Vendor and Model	Intel Xeon E5-2698 v4
Processor Speed (GHz)	2.2
Total Sockets/Total Cores/Total Threads	1 Sockets / 20 Cores / 40 Threads
Memory Size (in GB, Number of DIMMs)	Hypervisor: 64GB, 8
Network Controller(s) Vendors and Models	Emulex OneConnect Oce14000 1GbE Dual Port Adapter
Operating System, Version, Bitness, and Service Pack	Hypervisor: VMware ESXi 6.0.0 U2 Build 3620759
Virtual Center VM Number of vCPUs	8
Virtual Center VM Virtual Memory (in GB)	32
Virtual Center VM Operating System, Version, Bitness, and Service Pack	Microsoft Windows Server 2008 R2 Standard (64-bit)
Other Hardware	None
Other Software	None

Clients

Total Number of Virtual Clients / Virtual Client Hosts	9 / 3
System Model(s)	Fujitsu PRIMERGY RX2530 M2
Processor Vendor(s) and Model(s)	Intel Xeon E5-2699 v4
Processor Speed(s) (GHz)	2.2
Total Sockets/Total Cores/Total Threads	2 Sockets / 44 Cores / 88 Threads
Memory per Virtual Client Host	128 GB
Network Controller(s) Vendors and Models	Emulex OneConnect Oce14000 1GbE Dual Port Adapter Emulex OneConnect Oce14000 10GbE Dual Port Adapter
Virtual Client Networking Notes	1 virtual adapter for management, 1 virtual adapter for workload traffic

Virtual Client Storage	1 x 300GB SAS 10K TOSHIBA AL14SEB03EN HDD with RAID 0 for Client Host OS
Notes	2 x 400GB SAS 12G TOSHIBA PX02SMF040 SSD with RAID 0 for Client VMs
Other Hardware	None
Other Software	VMware ESXi 6.0.0 Build U2 3620759

Notes for Workload

Virtualization Software Notes

- CDROM removed for all VMs except primeclient (default enabled)
- Config.HostAgent.log.level set to warning (default info)
- Vpx.Vpxa.config.log.level set to warning (default verbose)
- CPU and Memory shares set to high for all DS3DB VMs (default normal)
- Floppy removed for all VMs except primeclient (default enabled)
- Logging disabled for all VMs except primeclient (default enabled)
- Logical CPU configuration changed for multi-cpu VMs to 1 socket with multiple cores except primeclient and client VMs (default: Single core per socket)
- All memory reserved for DS3DB VMs
- Syslog.global.defaultSize set to 112 (default 1024) except Syslog.loggers.vmkernel.size remains default 1024
- CPU shares set to low for all Standby VMs (default normal)
- vSphere DRS Migration Threshold set to Fully Automated level 2

Changes in esx.conf:

- /adv/Cpu/CreditAgePeriod = 1000 (default 3000)
- /adv/Cpu/HTWholeCoreThreshold = 0 (default 800)
- /adv/DataMover/HardwareAcceleratedInit = 0 (default 1)
- /adv/DataMover/HardwareAcceleratedMove = 0 (default 1)
- /adv/Mem/CtlMaxPercent = 0 (default 65)
- /adv/Mem/ShareScanGHz = 0 (default 4)
- /adv/Numa/LTermFairnessInterval = 0 (default 5)
- /adv/Numa/MigImbalanceThreshold = 57 (default 10)
- /adv/Numa/PageMigEnable = 0 (default 1)
- /adv/Numa/RebalancePeriod = 60000 (default 2000)
- /adv/Numa/SwapLoadEnable = 0 (default 1)
- /adv/Numa/SwapLocalityEnable = 0 (default 1)
- /adv/Mem/VMOverheadGrowthLimit = 0 (default 4294967295)
- /adv/Disk/ReqCallThreshold = 1 (default 8)
- /adv/Disk/IdleCredit = 64 (default 32)
- /adv/Power/CpuPolicy = static (default balanced)
- /adv/VMFS3/HardwareAcceleratedLocking = 0 (default 1)

Server Notes

- Server BIOS settings:
 - Onboard Serial COM1 disabled (default enabled)
 - Turbo Boost Technology: enabled (Intel Turbo Boost up to 3.8GHz, default enabled)
 - CPU C1E support: disabled (default enabled)
 - Package C State Limit: C0 (default auto)

- Uncore Frequency Override: Maximum (default disabled)
- Link Frequency Select: 10.4GT/s (default auto)
- IMC Interleaving: 1-way (default auto)
- LLC Dead Line Alloc: disabled (default enabled)
- Stale Atos: enabled (default disabled)

Networking Notes

- vSwitch Configuration:
 - vSwitch0 on vmnic0 for Service Console (1Gb/s)
 - vSwitch1 for vMotion connection on vmnic5 at 10Gb/s
 - 9000 MTU (default 1500)
 - vSwitch2 for DS3 and standby workload on vmnic2 at 10Gb/s
 - vSwitch3 for Elastic Workload on vmnic3 at 10Gb/s
 - vSwitch4 for Auction Workload on vmnic4 at 10Gb/s

Storage Notes

- First Fujitsu Server PRIMERGY RX2540 M2 configured as a Fibre Channel Target:
 - Hardware details:
 - 2 x Intel Xeon E5-2667 v4@3.2GHz processors
 - 128GB RAM (8 x 16 GB dual rank PC4-19200 Registered DDR4 / 2400 MHz DIMMs)
 - 1 x QLogic QLE2672 Dual Port 16Gb FC HBA used as FC target controller
 - 1 x Fujitsu RAID SAS Controller with 1GB Cache (D3108)
 - 1 x 400GB SAS-SSD Toshiba PX02SMF040
 - 1 x Fusion ioMemory PX600 1.3TB PCIe-SSD
 - 2 x Fusion ioMemory PX600 2.6TB PCIe-SSD
 - Software details:
 - Operating System: SUSE Linux Enterprise Server 12 SP2 - 4.4.74-92.29-default (64-bit)
 - Fibre Channel Target SW: LIO (part of SUSE Linux Enterprise Server 12 SP2)

RAID configuration:

- SAS-SSD 1:
 - LUN 1: Storage system OS (400GB, this LUN is not counted in the Storage section)
- First PCIe-SSD:
 - LUN 1: DS3DB for tiles 0 (600GB)
 - LUN 2: DS3DB for tiles 6 (600GB)
 - LUN 3: AuctionDB, ElasticLB for tiles 0 (400GB)
 - LUN 4: AuctionNoSQL, ElasticDB for tiles 0 (400GB)
- Second PCIe-SSD:
 - LUN 1: DS3WebA, DS3WebB, DS3WebC, AuctionWebA, AuctionWebB, AuctionAppA, AuctionAppB, AuctionLB, AuctionMSQ, Standby, ElasticAppA, ElasticAppB, ElasticWebA, ElasticWebB for tiles 0 (400GB)
 - LUN 2: DS3WebA, DS3WebB, DS3WebC, AuctionWebA, AuctionWebB, AuctionAppA, AuctionAppB, AuctionLB, AuctionMSQ, Standby, ElasticAppA, ElasticAppB, ElasticWebA, ElasticWebB for tiles 3 (400GB)
 - LUN 3: DS3WebA, DS3WebB, DS3WebC, AuctionWebA, AuctionWebB, AuctionAppA, AuctionAppB, AuctionLB, AuctionMSQ, Standby, ElasticAppA, ElasticAppB, ElasticWebA, ElasticWebB for tiles 6 (400GB)
- Third PCIe-SSD:
 - LUN 1: DS3DB for tiles 3 (600GB)

- LUN 2: AuctionNoSQL, ElasticDB for tiles 3 (600GB)
 - LUN 3: AuctionDB, ElasticLB for tiles 3 (400GB)
 - LUN 4: AuctionDB, ElasticLB for tiles 6 (400GB)
- Second Fujitsu Server PRIMERGY RX2540 M2 configured as a Fibre Channel Target:
 - Hardware details:
 - 2 x Intel Xeon E5-2667 v4@3.2GHz processors
 - 128GB RAM (8 x 16 GB dual rank PC4-19200 Registered DDR4 / 2400 MHz DIMMs)
 - 1 x QLogic QLE2672 Dual Port 16Gb FC HBA used as FC target controller
 - 1 x Fujitsu RAID SAS Controller with 1GB Cache (D3108)
 - 1 x 400GB SAS-SSD Toshiba PX02SMF040
 - 1 x Fusion ioMemory PX600 1.3TB PCIe-SSD
 - 2 x Fusion ioMemory PX600 2.6TB PCIe-SSD
 - Software details:
 - Operating System: SUSE Linux Enterprise Server 12 SP2 - 4.4.74-92.29-default (64-bit)
 - Fibre Channel Target SW: LIO (part of SUSE Linux Enterprise Server 12 SP2)

RAID configuration:

- SAS-SSD 1:
 - LUN 1: Storage system OS (400GB, this LUN is not counted in the Storage section)
- First PCIe-SSD:
 - LUN 1: DS3DB for tiles 1 (600GB)
 - LUN 2: AuctionNoSQL, ElasticDB for tiles 1 (600GB)
 - LUN 3: AuctionDB, ElasticLB for tiles 1 (400GB)
 - LUN 4: AuctionNoSQL, ElasticDB for tiles 6 (400GB)
- Second PCIe-SSD:
 - LUN 1: DS3WebA, DS3WebB, DS3WebC, AuctionWebA, AuctionWebB, AuctionAppA, AuctionAppB, AuctionLB, AuctionMSQ, Standby, ElasticAppA, ElasticAppB, ElasticWebA, ElasticWebB for tiles 1 (400GB)
 - LUN 2: DS3WebA, DS3WebB, DS3WebC, AuctionWebA, AuctionWebB, AuctionAppA, AuctionAppB, AuctionLB, AuctionMSQ, Standby, ElasticAppA, ElasticAppB, ElasticWebA, ElasticWebB for tiles 4 (400GB)
 - LUN 3: DS3WebA, DS3WebB, DS3WebC, AuctionWebA, AuctionWebB, AuctionAppA, AuctionAppB, AuctionLB, AuctionMSQ, Standby, ElasticAppA, ElasticAppB, ElasticWebA, ElasticWebB for tiles 7 (400GB)
- Third PCIe-SSD:
 - LUN 1: DS3DB for tiles 4 (600GB)
 - LUN 2: AuctionNoSQL, ElasticDB for tiles 4 (600GB)
 - LUN 3: AuctionDB, ElasticLB for tiles 4 (400GB)
 - LUN 4: AuctionNoSQL, ElasticDB for tiles 7 (400GB)
- Third Fujitsu Server PRIMERGY RX2540 M2 configured as a Fibre Channel Target:
 - Hardware details:
 - 2 x Intel Xeon E5-2667 v4@3.2GHz processors
 - 128GB RAM (8 x 16 GB dual rank PC4-19200 Registered DDR4 / 2400 MHz DIMMs)
 - 1 x QLogic QLE2672 Dual Port 16Gb FC HBA used as FC target controller
 - 1 x Fujitsu RAID SAS Controller with 1GB Cache (D3108)
 - 1 x 400GB SAS-SSD Toshiba PX02SMF040
 - 1 x Fusion ioMemory PX600 1.3TB PCIe-SSD
 - 2 x Fusion ioMemory PX600 2.6TB PCIe-SSD

- Software details:
 - Operating System: SUSE Linux Enterprise Server 12 SP2 - 4.4.74-92.29-default (64-bit)
 - Fibre Channel Target SW: LIO (part of SUSE Linux Enterprise Server 12 SP2)

RAID configuration:

- SAS-SSD 1:
 - LUN 1: Storage system OS (400GB, this LUN is not counted in the Storage section)
- First PCIe-SSD:
 - LUN 1: DS3DB for tiles 2 (600GB)
 - LUN 2: DS3DB for tiles 7 (600GB)
 - LUN 3: AuctionDB, ElasticLB for tiles 2 (400GB)
 - LUN 4: AuctionNoSQL, ElasticDB for tiles 2 (400GB)
- Second PCIe-SSD:
 - LUN 1: DS3WebA, DS3WebB, DS3WebC, AuctionWebA, AuctionWebB, AuctionAppA, AuctionAppB, AuctionLB, AuctionMSQ, Standby, ElasticAppA, ElasticAppB, ElasticWebA, ElasticWebB for tiles 2 (400GB)
 - LUN 2: DS3WebA, DS3WebB, DS3WebC, AuctionWebA, AuctionWebB, AuctionAppA, AuctionAppB, AuctionLB, AuctionMSQ, Standby, ElasticAppA, ElasticAppB, ElasticWebA, ElasticWebB for tiles 5 (400GB)
 - LUN 3: SVMotion Target Lun (100GB)
 - LUN 4: XVMotion Target Lun (100GB)
 - LUN 5: Deploy Lun (100GB)
 - LUN 6: vmmark3-template-053117 (100GB)
- Third PCIe-SSD:
 - LUN 1: DS3DB for tiles 5 (600GB)
 - LUN 2: AuctionNoSQL, ElasticDB for tiles 5 (600GB)
 - LUN 3: AuctionDB, ElasticLB for tiles 5 (400GB)
 - LUN 4: AuctionDB, ElasticLB for tiles 7 (400GB)

- All LUNs were configured as block devices; no system memory was used for caching

Datacenter Management Server Notes

- Virtual Center realized as a VM running on a dedicated Hypervisor system:
 - Number of vCPUs: 8 (Two vSocket)
 - Size of vRAM: 32GB
 - Operating System: Windows Server 2008 R2 Standard 64-bit

Operating System Notes

VMware ESXi 6.5.0b Build 5146846 was installed using 'Fujitsu Custom Image for VMware ESXi 6.5' named VMware-ESXi-6.5.0-5146846-Fujitsu-v401-1.iso

Software Notes

None

Client Notes

Client Host1: Client0,Client3,Client6
Client Host2: Client1,Client4,Client7
Client Host3: Client2,Client5,PrimeClient

Changes in esx.conf:

- /adv/Power/CpuPolicy = "static" (default balanced)
- /adv/UserVars/SuppressShellWarning = 1 (default 0)

elxnet and lpfc module updated after ClientHost's OS was installed
elxnet version: 11.1.145.0-1OEM.600.0.0.2768847
lpfc version: 11.1.145.18-1OEM.600.0.0.2768847

Other Notes

None

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