



SPC BENCHMARK 1™

EXECUTIVE SUMMARY

MACROSAN TECHNOLOGIES CO., LTD MACROSAN MS3000G2

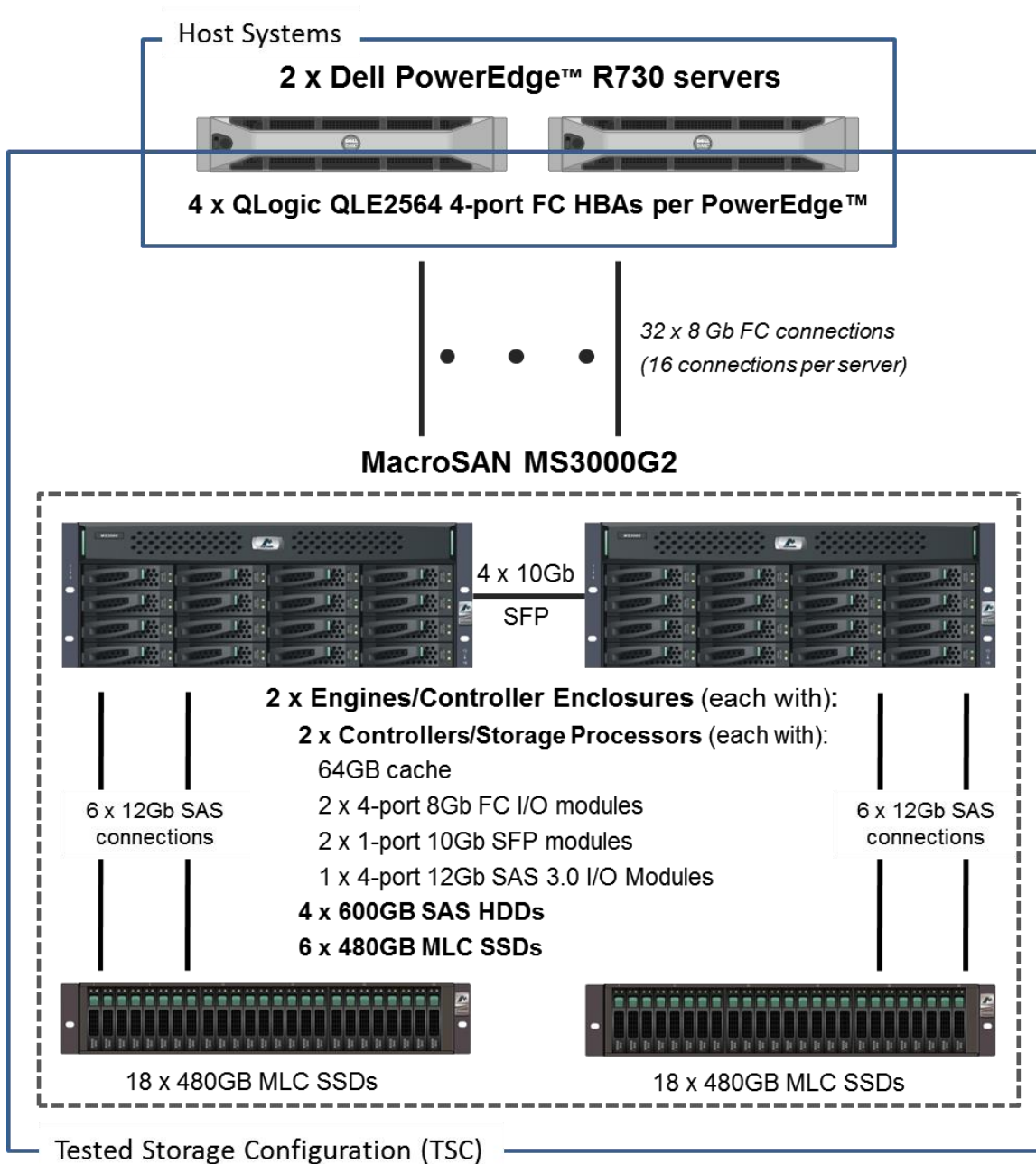
SPC-1 IOPS™	430,020
SPC-1 Price-Performance™	\$0.33/SPC-1 IOPS™
SPC-1 IOPS™ Response Time	0.444 ms
SPC-1 Overall Response Time	0.297 ms
SPC-1 ASU Capacity	10,640.0 GB
SPC-1 ASU Price	\$13.11/GB
SPC-1 Total System Price	\$139,487.76
Data Protection Level	Protected 2 (RAID-10 and full redundancy)
Physical Storage Capacity	25,872 GB
Pricing Currency / Target Country	U.S. Dollars / People's Republic of China

SPC-1 V3.4.0

SUBMISSION IDENTIFIER: A31005

SUBMITTED FOR REVIEW: MAY 15, 2017

Benchmark Configuration Diagram



Tested Storage Product Description

MacroSAN MS3000G2 is a new generation of MacroSAN mid-range storage products which is oriented to medium size data centers. It integrates lots of advanced design concept and architecture technology to provide safe, reliable, flexible storage platform.

MS3000G2 can compose multi-engine architecture, and scale to at most 16 controllers. Each engine, with two controllers, support at most 256GB cache and default configuration of six 1 Gb/s Ethernet interfaces and four 10 Gb/s Ethernet interfaces. Furthermore, based on ODSP software platform, MS3000G2 can realize interface development, customized function development and function migration. MS3000G2 reaches the leading level in performance, reliability, function and management.

For more details, visit:

<http://www.macrosan.com/english/pro.aspx?id=55>

Priced Storage Configuration Components

8 x QLogic QLE2564 4-port FC HBAs
2 x MacroSAN MS3000G2, each with:
2 x Controllers/Storage Processors, each with:
64GB cache
2 x 4-port 8Gb FC I/O modules
2 x 1-port 10Gb SFP modules
1 x 4-port 12Gb SAS 3.0 I/O Modules
4 x 600GB SAS HDDs
6 x 480GB MLC SSDs
2 x External storage enclosures, each with:
18 x 480GB MLC SSDs

Storage Configuration Pricing

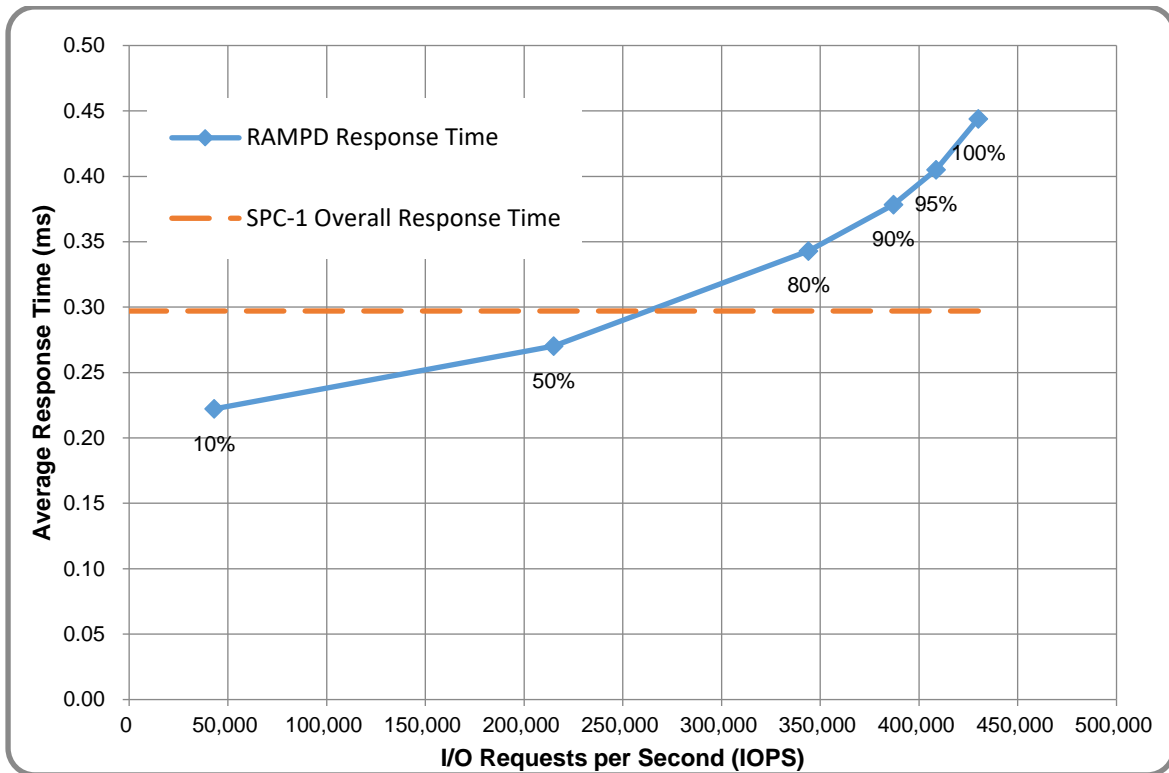
	Description	Qty	Unit Price	Ext. Price	Disc.	Disc. Price
Hardware & Software						
MS3000G2-128GB-Enhanced	MS3000G2 Enhanced Storage Controllers Unit (Dual Controllers, 4U, 16*3.5/2.5 disks, 128GB cache, 6*GE ports+4*10GE port-no SFPs, 4*IO module slots, 3Y 7x9xND Basic Svc&Warranty)	2	35,007.35	70,014.71	50%	35,007.35
SSU2225	SSU2225 SAS Switch Unit(support 25 2.5inch disks, SAS 3.0)	2	7,948.88	15,897.75	50%	7,948.88
MS3M2HD600G0C2AEA	600GB 15KRPM 2.5inch SAS disk/3.5 inch carrier	8	1,606.62	12,852.94	50%	6,426.47
MS2M1SD480G0M2AEB	480GB MLC SSD Drive(2.5") for SSU2225	36	2,367.65	85,235.29	50%	42,617.65
MS3M1SD480G0M2AEA	480GB MLC SSD Drive(2.5") for MS3000G2	12	2,367.65	28,411.76	50%	14,205.88
IOA1014A	4*8Gb FC IO Module	8	2,029.41	16,235.29	50%	8,117.65
MS1MMF010G	10Gb MultiMode Datacom SFP+ Optical Transceiver	8	321.32	2,570.59	50%	1,285.29
LIS_MS3000-M_BASE_STD	MacroSAN ODSP for Multi control - MS3000G2 Storage Management Software (Basic Storage Management, CRAID, support FC&iSCSI, System monitoring and Warning) - English version	1	7,058.82	7,058.82	50%	3,529.41
LC05-LC05-MI2-L5	5M fiber (multimode, LC-LC)	36	8.00	288.00		288.00
05020012	SAS cable (1M, miniSASHD-miniSASHD)	12	0.00	0.00		0.00
02090044	Qlogic QLE2564 HBA Card, PCIE, 8Gbps 4-Ports, Fiber Channel Multimode LC Optic Interface	8	1,500.00	12,000.00		12,000.00
Hardware & Software Subtotal						131,426.58
Support & Maintenance						
MS-3000-SV-BS-SPU	MS3000G2 Installation Service - Per SPU	2	1,088.24	2,176.47	20%	1,741.18
MS-3000-SV-BS-DSU	M3000G2 Installation Service - Per DSU	2	588.24	1,176.47	20%	941.18
MS-3000-SV-GS-1Y-SPU	MS3000G2 Svc&Warranty Upgrade - 7x24x4 Premium - Per Year Per SPU	2	1,941.18	3,882.35	20%	3,105.88
MS-3000-SV-GS-1Y-DSU	MS3000G2 Svc&Warranty Upgrade - 7x24x4 Premium - Per Year Per DSU	2	1,420.59	2,841.18	20%	2,272.94
Support & Maintenance Subtotal						8,061.18
SPC-1 Total System Price						139,487.76
SPC-1 IOPS™						430,020
SPC-1 Price-Performance™ (\$/SPC-1 IOPS™)						0.33
SPC-1 ASU Capacity (GB)						10,640
SPC-1 ASU Price (\$/GB)						13.11

Discount Details: The discounts shown are generally available, and based on the capacity and total price of the storage configuration purchased.

Warranty: Pricing includes Gold-Level Service with: 24x7 online support, unlimited software upgrades and bug fixes, and on-site presence of a qualified maintenance engineer within 4 hours of a problem acknowledgement, inside the Target Market.

Availability Date: Currently available.

Response Time and Throughput Graph



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Revision Information	
SPC Benchmark 1™ Revision	V3.4.0
SPC-1 Workload Generator Revision	V3.0.2 build cb4c38
Publication Revision History	Initial Publication