



SPC BENCHMARK 1™

EXECUTIVE SUMMARY

HUAWEI TECHNOLOGIES CO., LTD HUAWEI OCEANSTOR 18800F V5

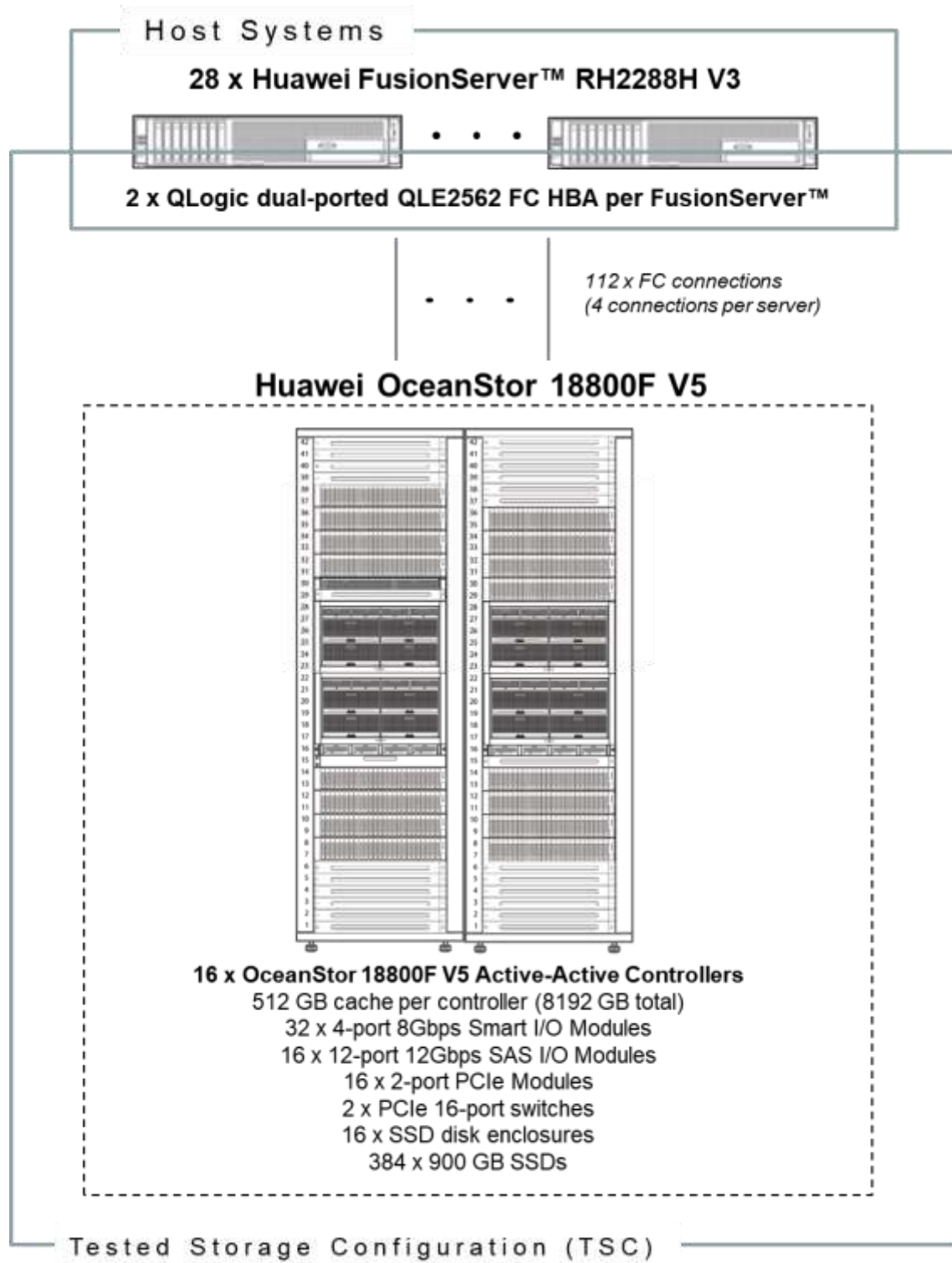
SPC-1 IOPS™	6,000,572
SPC-1 Price-Performance™	\$465.79/SPC-1 KIOPS™
SPC-1 IOPS™ Response Time	0.941 ms
SPC-1 Overall Response Time	0.533 ms
SPC-1 ASU Capacity	148,176 GB
SPC-1 ASU Price	\$18.87/GB
SPC-1 Total System Price	\$2,794,955.10
Data Protection Level	Protected 2 (RAID-10)
Physical Storage Capacity	343,680 GB
Pricing Currency / Target Country	U.S. Dollars / USA

SPC-1 V3.6

SUBMISSION IDENTIFIER: A31012

SUBMITTED FOR REVIEW: MARCH 7, 2018

Benchmark Configuration Diagram



Tested Storage Product Description

Huawei's OceanStor 18500F/18800F V5 mission-critical all-flash storage systems are dedicated to providing the highest level of data services for enterprises' mission-critical businesses.

Innovative SmartMatrix™ 2.0 architecture, industry-leading scalability, flash-enabled performance, and hybrid-cloud-ready solution provide the optimal data services for enterprises.

The OceanStor 18500F/18800F V5 systems satisfy the storage requirements of large-database OLTP/OLAP and cloud computing, making it a perfect choice for the government, finance, telecommunications, and manufacturing sectors.

For more details, visit:

<http://e.huawei.com/en/products/cloud-computing-dc/storage/unified-storage/18500f-18800f-v5>

Priced Storage Configuration Components

56 x QLogic dual-ported QLE2562 FC HBA
16 x OceanStor 18800F V5 Active-Active Controllers, each with: 512 GB cache (8192 GB total) 2 x 4-port 8Gbps Smart I/O Modules
16 x 12-port 12Gbps SAS I/O Modules
16 x 2U disk enclosures, each with: 24 x 900 GB SSDs (384 total)
2 x PCIe 16-port switches
1 x Service Processor
1 x 8-port KVM

Storage Configuration Pricing

	Description	Qty	Unit Price	Ext. Price	Disc.	Disc. Price
Hardware & Software						
88FV5-4C2T-AC	OceanStor 18800F V5 Engine(6U,Four Controller,AC240HVDC, 4*512GB Cache, 32*8Gb FC,48*port SAS,SPE73C0600)	4	930,857.00	3,723,428.00	72%	1,042,559.84
DV5-LPU5P2PCIE	2 port PCIe I/O module(with two NT Ports)	16	811.00	12,976.00	75%	3,244.00
HSSD-900G2S-A6	900GB SSD SAS Disk Unit(2.5")	384	10,621.00	4,078,464.00	75%	1,019,616.00
DAE22525U2-HF-AC	Disk Enclosure(2U, AC240HVDC, 2.5", Expanding Module, 25 Disk Slots, without Disk Unit, DAE52525U2)	16	8,366.00	133,856.00	75%	33,464.00
PRACK-SYS-H-AC	OceanStor 18000 Series System Primary Cabinet (with Service Processor, KVM, External MiniSAS HD Cable, Power Cable)	1	54,609.00	54,609.00	75%	13,652.25
SRACK-SYS-H-AC	OceanStor 18000 Series System Second Cabinet(with External MiniSAS HD Cable,Power Cable)	1	34,021.00	34,021.00	75%	8,505.25
N8GHBA000	QLOGIC QLE2562 HBA Card,PCIe,8Gbps DualPort ,Fiber Channel Multimode LC Optic Interface,English Manual, No Drive CD	56	1,698.00	95,088.00	0%	95,088.00
SWITCH-V5H2	PCIe 3.0 Switch(AC240HVDC,8GB Cache,16 Port,with 16*Quadwire 40 Gb/s Parallel AOC for PCIe 3.0,SWE1600P08)	2	11,478.00	22,956.00	0%	22,956.00
SN2F01FCPC	Patch Cord,DLC/PC,DLC/PC,Multi-mode, 3m, A1a.2, 2mm, 42mm DLC, OM3 bending insensitive	112	11.00	1,232.00	0%	1,232.00
88FV5-LBASIC	Basic Software Suite License (Including OceanStor OS, DeviceManager, SmartThin, SmartMulti-tenant, SmartPartition, SmartErase, SmartMigration,SmartMotion and SmartQoS and SystemReporter,UltraPath)	1	149,417.00	149,417.00	72%	41,836.76
Hardware & Software Subtotal						2,282,154.10

Support & Maintenance						
02351TLK-88134ULF-36	OceanStor 18800F V5 Engine(6U,Four Controller,AC\240HVDC, 4*512GB Cache, 32*8Gb FC,48*port SAS,SPE73C0600)-Hi-Care Onsite Premier 24x7x4H Engineer Onsite Service-36Month(s)	4	45,984.00	183,936.00	0%	183,936.00
02351RYF-88134ULF-36	900GB SSD SAS Disk Unit(2.5")-Hi-Care Onsite Premier 24x7x4H Engineer Onsite Service-36Month(s)	384	246.00	94,464.00	0%	94,464.00
88034KUY-88134UHK-36	Basic Software Suite License (Including OceanStor OS, DeviceManager, SmartThin, SmartMulti-tenant, SmartPartition, SmartErase, SmartMigration,SmartMotion and SmartQoS and SystemReporter,UltraPath)-Hi-Care Application Software Upgrade Support Service-36Month(s)	1	62,061.00	62,061.00	0%	62,061.00
88125ESH	OceanStor 18800F V5 Installation Service - Engineering	1	172,340.00	172,340.00	0%	172,340.00
Support & Maintenance Subtotal						512,801.00
SPC-1 Total System Price						2,794,955.10
SPC-1 IOPS™						6,000,572
SPC-1 Price-Performance™ (\$/SPC-1 KIOPS™)						465.79
SPC-1 ASU Capacity (GB)						148,176
SPC-1 ASU Price (\$/GB)						18.87

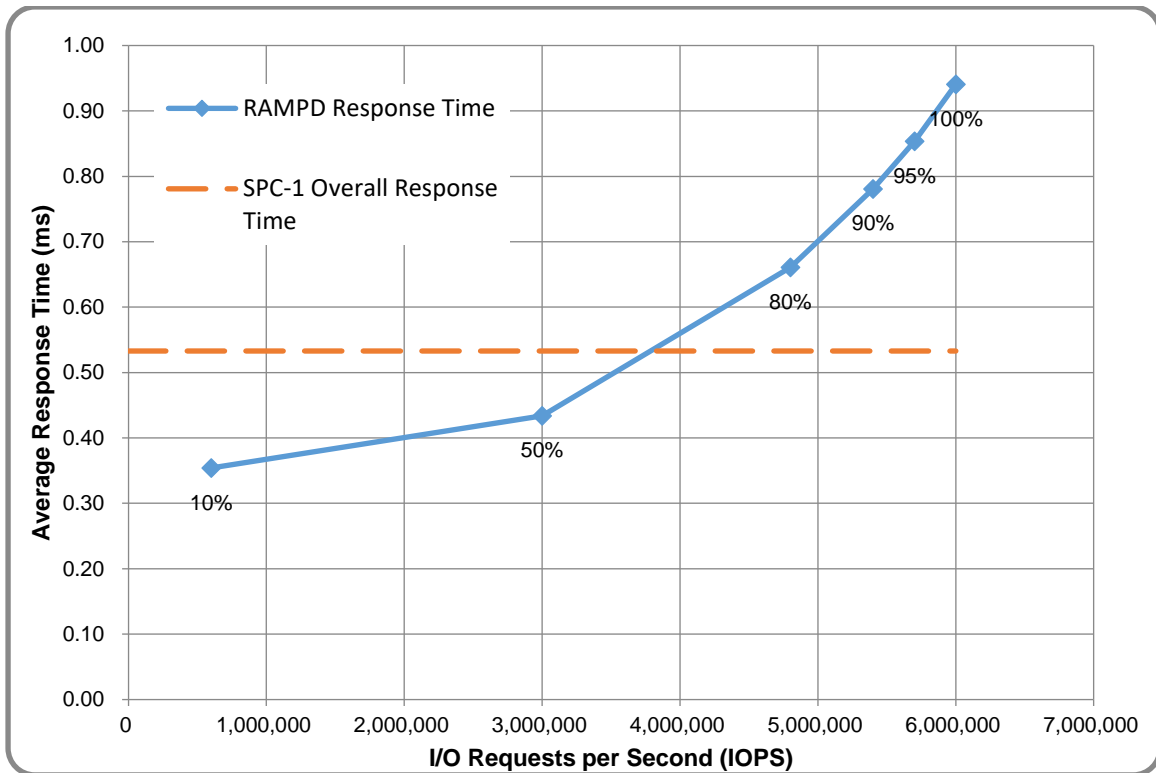
Third-Party Reseller: Huawei Technologies Co., Ltd. only sells its products to third-party resellers who, in turn, sell those products to U.S. customers. The above reflects the pricing quoted by one of those third-party resellers. See Appendix B of the Full Disclosure Report for a copy of the third-party reseller's quotation.

Discount Details: The discounts shown are based on the storage capacity purchased and are generally available.

Warranty: Hi-Care Premier On-Site Service include: 7x24 Technical Assistance Center Access. Access to all new software updates and Online Support. 24x7 with 4-hour On-site Hardware Replacement.

Availability Date: Currently available.

Response Time and Throughput Graph



Contact Information	
Test Sponsor Primary Contact	Huawei Technologies Co., Ltd.– www.huawei.com Zhong Xu – xuzhong@huawei.com
SPC Auditor	InfoSizing – www.sizing.com Francois Raab – francois@sizing.com

Revision Information	
SPC Benchmark 1™ Revision	V3.6.0
SPC-1 Workload Generator Revision	V3.0 build d34fb3c
Publication Revision History	First Edition