



SPC BENCHMARK 1™

EXECUTIVE SUMMARY

HUAWEI TECHNOLOGIES CO., LTD. HUAWEI OCEANSTOR DORADO18000 V3

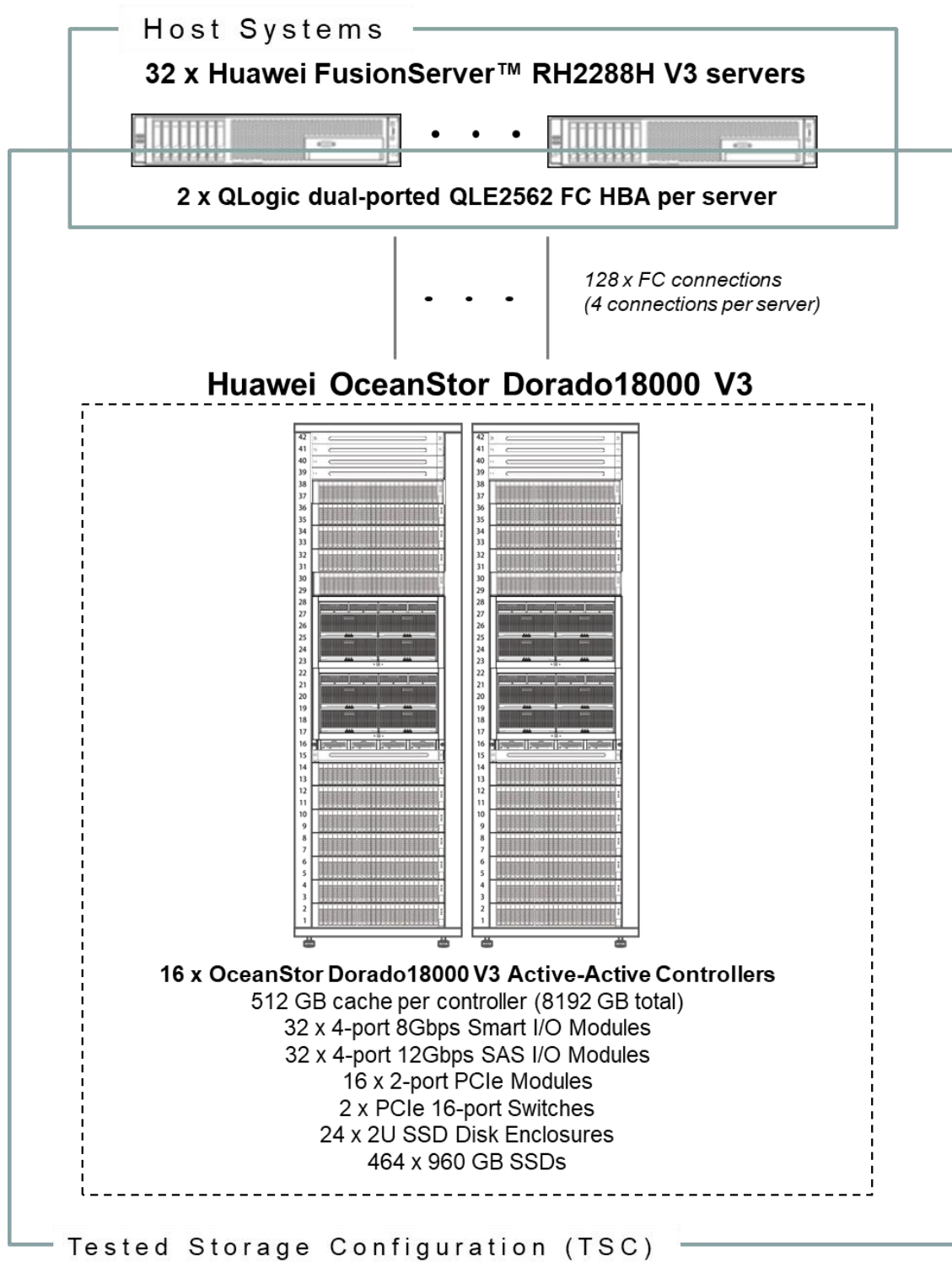
SPC-1 IOPS™	7,000,565
SPC-1 Price-Performance™	\$376.96/SPC-1 KIOPS™
SPC-1 IOPS™ Response Time	0.814 ms
SPC-1 Overall Response Time	0.554 ms
SPC-1 ASU Capacity	211,316 GB
SPC-1 Space Effectiveness Ratio	0.73
SPC-1 ASU Price	\$12.49/GB
SPC-1 Total System Price	\$2,638,917.96
Data Protection Level	Protected 2 (RAID-10)
Physical Storage Capacity	445,440 GB
Pricing Currency / Target Country	U.S. Dollars / USA

SPC-1 V3.8

SUBMISSION IDENTIFIER: A31017

SUBMITTED FOR REVIEW: OCTOBER 30, 2018

Benchmark Configuration Diagram



Tested Storage Product Description

Huawei OceanStor Dorado V3 all-flash storage is purpose-built for enterprise-class mission-critical business. Powered by Huawei FlashLink™ technology, it is scalable to 16 controllers and supports up to 7 million IOPS, boosting application performance threefold while delivering a consistent latency of 0.5ms with inline compression, inline deduplication, and snapshot enabled. It employs gateway-free active-active technology to ensure RPO=0 and RTO≈0, and can be upgraded to the 3DC solution to achieve 99.9999% availability. It also features inline compression and inline de-duplication, leading to OPEX savings of 75 percent.

The OceanStor Dorado V3 is ideal for use with databases, virtual desktop infrastructure (VDI), virtual server infrastructure (VSI), and SAP HANA. It has been designed to facilitate the transition to all-flash for customers in the finance, manufacturing, and telecom sectors.

For more details, visit:

<http://e.huawei.com/en/products/cloud-computing-dc/storage/unified-storage/dorado-v3>

Priced Storage Configuration Components

64 x QLogic dual-ported QLE2562 FC HBA
16 x OceanStor™ Dorado 18000 V3 Active-Active Controllers, each with: 512 GB cache (8192 GB total)
32 x 4-port 8Gbps Smart I/O Modules
32 x 4-port 12Gbps SAS I/O Modules
16 x 2-port PCIe Modules
8 x 2U Disk Enclosures, each with: 8 x 960 GB SSDs
16 x 2U Disk Enclosures, each with: 25 x 960 GB SSDs
2 x PCIe 16-port Switches

Storage Configuration Pricing

	Description	Qty	Unit Price	Ext. Price	Disc.	Disc. Price
Hardware & Software						
D18V3-4C2T-AC	Dorado18000 V3 Engine(6U,Four Controller,AC\240HVDC,4*512GB Cache,32*8G FC,32*port SAS,SPE73C0600)	4	406,584.00	1,626,336.00	50%	813,168.00
DV5-LPU5P2PCIE	2 port PCIe I/O module(with two NT Ports)	16	681.00	10,896.00	0%	10,896.00
D18V3-SSD-SAS-960G	960GB SSD SAS Disk Unit(2.5")	464	4,569.25	2,120,132.00	48%	1,102,468.64
D18V3-SDAE25U2-AC	Disk Enclosure(2U,AC\240HVDC,2.5",Expanding Module,25 Disk Slots,without Disk Unit,DAE52525U2)	24	4,454.00	106,896.00	48%	55,585.92
D18V3-RACK-SYS-AC	OceanStor Dorado18000 V3 Series AC System Cabinet	2	13,127.00	26,254.00	48%	13,652.08
N8GHBA000	QLOGIC QLE2562 HBA Card,PCIE,8Gbps DualPort ,Fiber Channel Multimode LC Optic Interface,English Manual, No Drive CD	64	1,698.00	108,672.00	0%	108,672.00
SWITCH-V5H2	PCIe 3.0 Switch(AC\240HVDC,8GB Cache,16 Port,SWE1600P08)	2	13,336.00	26,672.00	0%	26,672.00
SN2F01FCPC	Patch Cord,DLC/PC,DLC/PC,Multi-mode,3m,A1a.2,2mm,42mm DLC,OM3 bending insensitive	128	20.00	2,560.00	0%	2,560.00
D18V3-LBSB	Basic Software Suite Unlimited Capacity License (Including OceanStor OS,Device Manager,SmartThin,SmartCompression,SmartDe dup,SmartQoS,SmartMigration,SmartVirtualization,HyperMetro,HyperClone,HyperSnap,HyperReplication, SystemReporter,eService, and UltraPath)	1	521,310.40	521,310.40	50%	260,655.20
Hardware & Software Subtotal						2,394,329.84
Support & Maintenance						
02351WXJ-88134ULF-36	OceanStor Dorado18000 V3 Engine(6U,Four Controller,AC\240HVDC,4*512GB Cache,32*8G FC,32*port SAS,SPE73C0600)-Hi-Care Onsite Premier 24x7x4H Engineer Onsite Service-36Month(s)	4	17,202.60	68,810.40	0%	68,810.40
02352ANB-88134ULF-36	960GB SSD SAS Disk Unit(2.5")-Hi-Care Onsite Premier 24x7x4H Engineer Onsite Service-36Month(s)	464	122.40	56,793.60	0%	56,793.60
88034SDG-88134UHK-36	Basic Software Licenses (Including OceanStor OS,DeviceManager, SmartThin, SmartMigration, SmartDedupe, SmartCompression,SmartQoS and SystemReporter)-Hi-Care Application Software Upgrade Support Service-36Month(s)	1	71,235.00	71,235.00	0%	71,235.00
8812175865	OceanStor Dorado18000 V3 Installation Service - Engineering	1	47,749.12	47,749.12	0%	47,749.12
Support & Maintenance Subtotal						244,588.12
SPC-1 Total System Price						2,638,917.96
SPC-1 IOPS™						7,000,566
SPC-1 Price-Performance™ (\$/SPC-1 KIOPS™)						376.96
SPC-1 ASU Capacity (GB)						211,316
SPC-1 ASU Price (\$/GB)						12.49

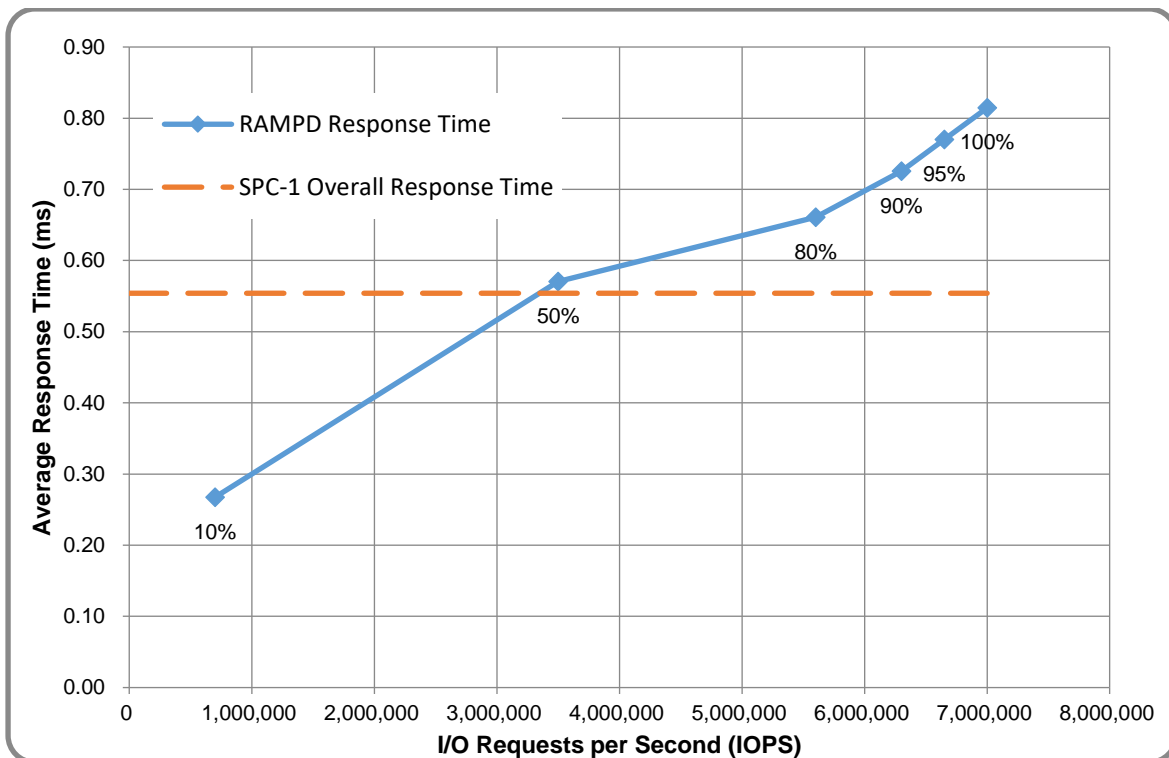
Third-Party Reseller: Huawei Technologies Co., Ltd. only sells its products to third-party resellers who, in turn, sell those products to U.S. customers. The above reflects the pricing quoted by one of those third-party resellers. See Appendix B of the Full Disclosure Report for a copy of the third-party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



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Revision Information	
SPC Benchmark 1™ Revision	V3.8.0
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