



SPC BENCHMARK 1™

EXECUTIVE SUMMARY

HUAWEI TECHNOLOGIES CO., LTD HUAWEI OCEANSTOR 18500 V5

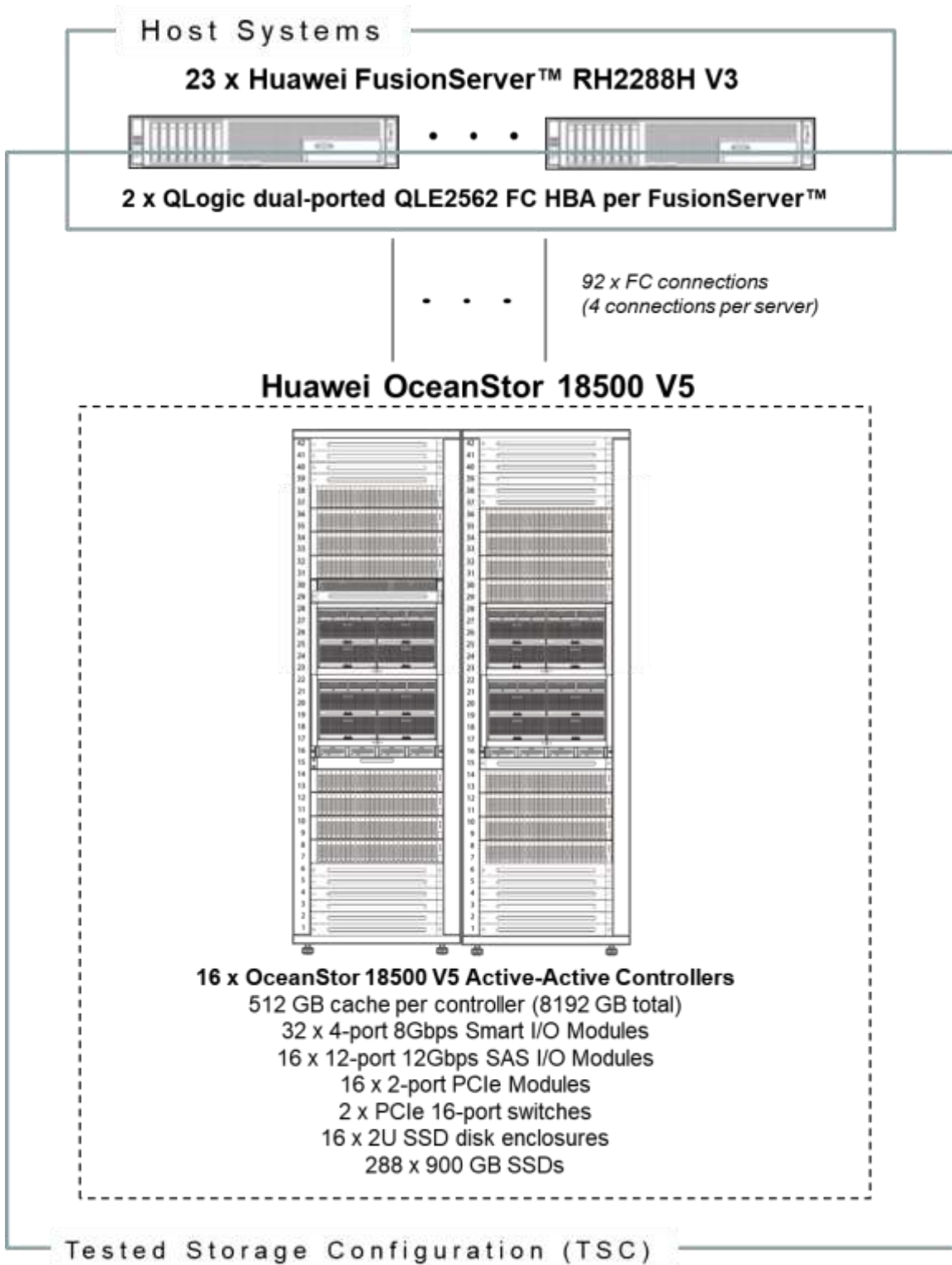
| | |
|-----------------------------------|------------------------------|
| SPC-1 IOPS™ | 4,800,419 |
| SPC-1 Price-Performance™ | \$400.96/SPC-1 KIOPS™ |
| SPC-1 IOPS™ Response Time | 0.821 ms |
| SPC-1 Overall Response Time | 0.513 ms |
| SPC-1 ASU Capacity | 109,093 GB |
| SPC-1 ASU Price | \$17.65/GB |
| SPC-1 Total System Price | \$1,924,748.73 |
| 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: A31013

SUBMITTED FOR REVIEW: MAY 28, 2018

Benchmark Configuration Diagram



Tested Storage Product Description

Huawei's OceanStor 18500/18800 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 18500/18800 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/massive-storage/18500-18800-v5>

Priced Storage Configuration Components

| |
|--|
| 46 x QLogic dual-ported QLE2562 FC HBA |
| 16 x OceanStor 18500 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: 18 x 900 GB SSDs (288 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 | | | | | | |
| 85V5-4C2048G-AC-HW | OceanStor 18500 V5 Engine (6U, Four Controller, AC240HVDC, 4*512GB Cache, 32*8Gb FC, 48*port 4*12Gb SAS,SPE73C0600) | 4 | 501,015.00 | 2,004,060.00 | 72% | 561,136.80 |
| DV5-LPU5P2PCIE | 2 port PCIe I/O module(w ith tw o NT Ports) | 16 | 811.00 | 12,976.00 | 72% | 3,633.28 |
| HSSD-900G2S-A6 | 900GB SSD SAS Disk Unit(2.5") | 288 | 10,624.00 | 3,059,712.00 | 75% | 764,928.00 |
| DAE52525U2-AC-A3 | Disk Enclosure (2U,AC240HVDC, 2.5", Expanding Module, 25 Disk Slots, w ithout Disk Unit, DAE52525U2) | 16 | 8,364.50 | 133,832.00 | 72% | 37,472.96 |
| PRACK-SYS-H-AC | OceanStor 18000 Series System Primary Cabinet (w ith Service Processor, KVM, External MiniSAS HD Cable, Pow er Cable) | 1 | 54,609.00 | 54,609.00 | 0% | 54,609.00 |
| SRACK-SYS-H-AC | OceanStor 18000 Series System Second Cabinet (w ith External MiniSAS HD Cable, Pow er Cable) | 1 | 34,021.00 | 34,021.00 | 0% | 34,021.00 |
| N8GHBA000 | QLOGIC QLE2562 HBA Card, PCIe, 8Gbps DualPort , Fiber Channel Multimode LC Optic Interface, English Manual, No Drive CD | 46 | 1,698.00 | 78,108.00 | 0% | 78,108.00 |
| SWITCH-V5H2 | PCIe 3.0 Sw itch (AC240HVDC, 8GB Cache, 16 Port, w ith 16*Quadw ire 40 Gb/s Parallel AOC for PCIe 3.0, SWE1600P08) | 2 | 11,472.00 | 22,944.00 | 0% | 22,944.00 |
| SN2F01FCPC | Patch Cord, DLC/PC, DLC/PC, Multi-mode, 3m, A1a.2, 2mm, 42mm DLC, OM3 bending insensitive | 92 | 14.00 | 1,288.00 | 0% | 1,288.00 |
| 85V5-LBASIC-N | License (Including OceanStor OS, Device Manager SmartThin, SmartMotion, SmartQoS, SmartPartition, SmartCache, SmartMigration, SmartErase, SmartMulti-tenant and SystemReporter, UltraPath) | 1 | 149,505.00 | 149,505.00 | 72% | 41,861.40 |
| Hardware & Software Subtotal | | | | | | 1,600,002.44 |

| Support & Maintenance | | | | | | |
|---|---|-----|------------|------------|----|---------------------|
| 02351QHB-88134ULF-36 | OceanStor 18500 V5 Engine(6U, Four Controller, AC240HVDC,4*512GB Cache, 32*8Gb FC, 48*port 4*12Gb SAS, SPE73C0600) Hi-Care Onsite Premier 24x7x4H Engineer Onsite Service-36Month(s) | 4 | 12,855.60 | 51,422.40 | 0% | 51,422.40 |
| 02351RYF-88134ULF-36 | 900GB SSD SAS Disk Unit(2.5")-Hi-Care Onsite Premier 24x7x4H Engineer Onsite Service-36Month(s) | 288 | 244.80 | 70,502.40 | 0% | 70,502.40 |
| 88034JGX-88134UHK-36 | License (Including OceanStor OS, Device Manager, SmartThin, SmartMotion, SmartQoS, SmartPartition, SmartCache, SmartMigration, SmartErase, SmartMulti-tenant and SystemReporter, UltraPath) Hi-Care Application Software Upgrade Support Service-36Month(s) | 1 | 59,626.80 | 59,626.80 | 0% | 59,626.80 |
| 8812099165 | OceanStor 18500 V5 Installation Service - Engineering | 1 | 143,194.69 | 143,194.69 | 0% | 143,194.69 |
| Support & Maintenance Subtotal | | | | | | 324,746.29 |
| SPC-1 Total System Price | | | | | | 1,924,748.73 |
| SPC-1 IOPS™ | | | | | | 4,800,419 |
| SPC-1 Price-Performance™ (\$/SPC-1 KIOPS™) | | | | | | 400.96 |
| SPC-1 ASU Capacity (GB) | | | | | | 109,093 |
| SPC-1 ASU Price (\$/GB) | | | | | | 17.65 |

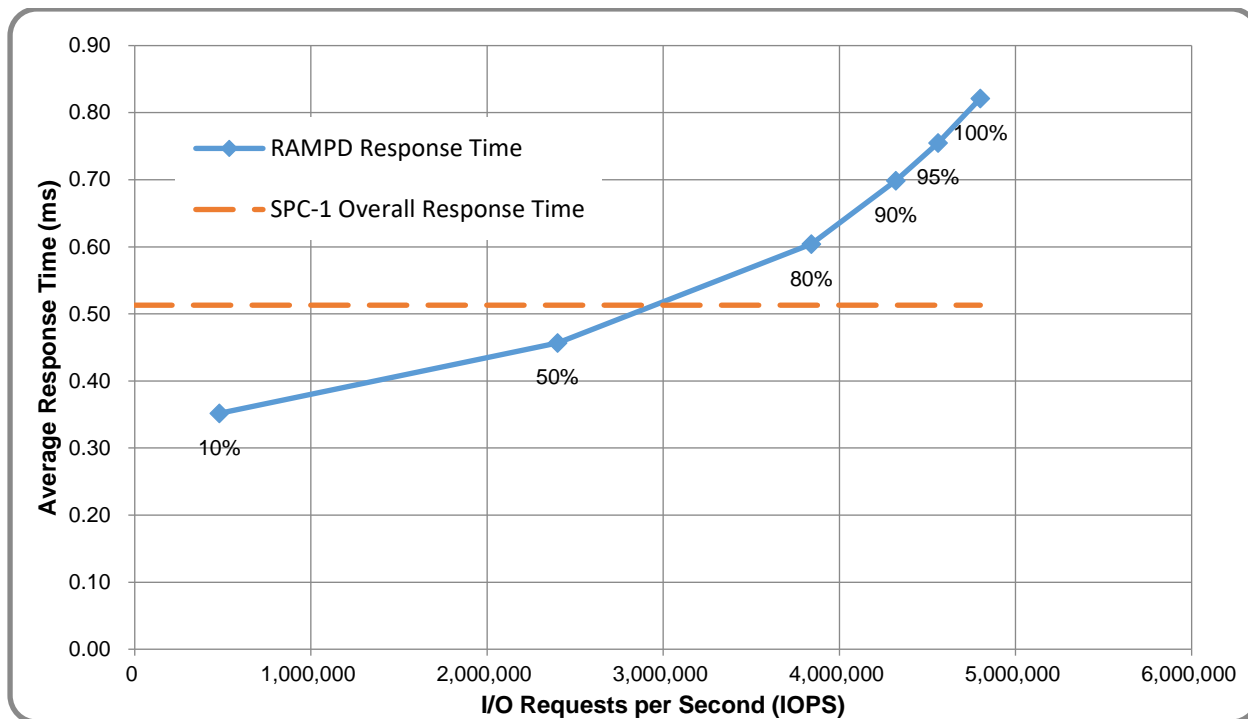
Third-Party Reseller: Huawei Technologies Co., Ltd. only sells its products to third-party resellers who, in turn, sell those products to U.S. customers. The above reflects the pricing quoted by one of those third-party resellers. See Appendix B of the Full Disclosure Report for a copy of the third-party 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 | |
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| Revision Information | |
|--|--------------------|
| SPC Benchmark 1™ Revision | V3.6.0 |
| SPC-1 Workload Generator Revision | V3.0 build d34fb3c |
| Publication Revision History | First Edition |