



Huawei FusionInsight for Big Data

TPCx-HS Rev. 1.3.0
TPC-Pricing Rev. 1.7.0

Report Date:
September 14, 2015

Total System Cost

TPCx-HS Performance Metric

Price/Performance

493,886 USD

9.11
HSph@1TB

54,214 USD
\$/HSph@1TB

Scale Factor

Apache Hadoop
Compatible Software

Operating System

Other Software

Availability Date

1TB

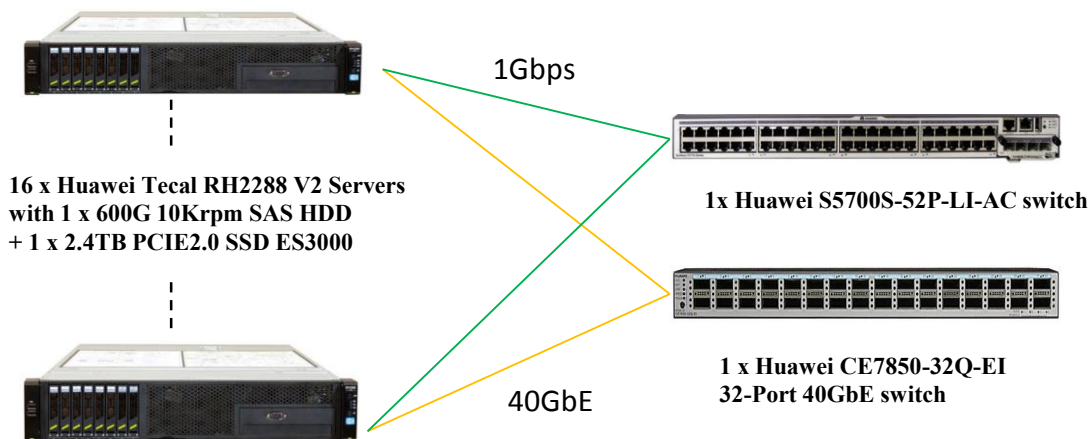
Huawei FusionInsight
2.5

Red Hat Enterprise Linux
Server 6.5

None

September 14,
2015

System Configuration



Physical Storage/Scale Factor: 48.00

Scale Factor/Physical Memory: 0.25

Servers:	16 x Huawei Tecal RH2288 V2 Server
Total Processors/Cores/Threads	32/256/512
Server Configuration:	
Processors	2 x Intel® Xeon® Processor E5-2680 v2, 2.70 GHz, 20MB L3
Memory	256GB
Storage Controller	1 x Symbios Logic MegaRAID SAS 2208
Storage Device	1 x 600GB 10K SAS HDD (internal) 1 x 2.4TB Huawei ES3000 PCIe SSD Card
Network	1 x Mellanox MCX314A-BCBT ConnectX-3 Dual-port 40/56GbE QSFP
Connectivity:	1 x Huawei CE7850-32Q-EI 40 GbE switch 1 x Huawei S5700S-52P-LI-AC 1Gbps switch (for cluster management)



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Description	Part Number	Source	Unit Price	Qty	Extended Price	3 Year Maint.
Hardware Components						
RH2288 V2 (Chassis for 8HDD)	02310JUP	1	1,210	16	\$19,360	
BIOS license	05200143	1	0	16	\$0	
2U RISER CARD MODULE	02310JUC	1	79	16	\$1,264	
Internal Mini SAS SM36	04050434	1	0	32	\$0	
SR320BC SAS/SATA RAID Card,RAID0,1,10,5,50,6,60,512MB Cache(LSI2208),Support Battery and SuperCap	02310QNL	1	449	16	\$7,184	
X86 series,FCLGA2011,2700MHz,0.9V,64bit, 130000mW,SandyBridge EP Xeon E5-2680,8Core,ECP Dedicated	41020283	1	3,199	32	\$102,368	
Heat sink-DKBA0.485.0386.ASM-CPU Heat sink-105X70X60mm-Cu	21161133	1	0	32	\$0	
Memory Module, DDR3 RDIMM, 16GB, 240pin, 1.1ns, 1866000KHz, 1.5V, ECC, 2Rank(1G*4bit), Height 30mm	06200172	1	389	240	\$93,360	
Memory Module, DDR3 RDIMM, 16GB, 240pin, 1.25ns, 1600000KHz, 1.5V,ECC, 2Rank(1G*4bit), Height 30mm	06200121	1	389	16	\$6,224	
Hard Disk-600GB-SAS 6.0Gb/s-10000rpm, 2.5"-16MB or above, Hot-swap-Built-in-Front Panel	02310KPU	1	499	16	\$7,984	
Tecal RH2285,750W golden power supply module	98080310	1	279	32	\$8,928	
Power Cords Cable,China AC Power 250V10A,3.0m,PISM,227IEC53-1.0*2(3C),C13SF,Black	04041104	1	0	32	\$0	
UC-10KM Conversion Connector,ATEN,PS/2 to USB, No Document, Black	06040070	1	0	16	\$0	\$13,693
RH2285&RH2288 V2 Server QuickStart Guide-(V100R002_04)	31505276	1	0	16	\$0	
CD-ROM Driver,CD 24X/DVD 8X,12.7*128*126.1mm,In,SATA,5V power,include panel	06020085	1	59	1	\$59	
USM,US1WIN11,Universal Service Manager V2,USM,ServiceCD	05116363	1	0	16	\$0	
Rechargeable battery,Li-ion battery, 1.5V, 1500mAh, Battery Group, with 27inch cable For LSISAS2208 CARD	24020944	1	299	16	\$4,784	
Plastic-DKBA4.409.1970-Battery and Cap Holder - RH2285 - PC+ABS	21201623	1	0	16	\$0	
IT Equipment Cable,Raid Board to Battery Cable,0.7m,H20(1.25),20*UL1571 28AWG,H20(1.25)	04050438	1	0	16	\$0	
2U Static Rail Kit	21240434	1	28	16	\$448	
40GBase-eSR4 Optical Transceiver,QSFP+, 40G, Multi-mode (850nm, 0.3km , MPO) (Connect to four SFP+ Optical Transceiver)	02310RMB	1	3,200	32	\$102,400	
Optical Cable Assembly, MPO/PC, MPO/PC, Multimode(OM3), GJFH 8A1a(LSZH), 15m, 3.5mm, 8 Cores, 0mm/0mm	14130923	1	55	16	\$880	
Server Management Agent	88032SCU	1	99	1	\$99	
Network Card, 40 Gigabit, 64bit, QSFP, 2 ports, PCIE 3.0 X8 - 15b3-1007-1, No Driver CD	06310093	1	696	16	\$11,136	
The 4th Generation PCIE SSD Card (2.4TB)	03030PWG	1	24,000	16	\$384,000	\$7,469
GDC,SC1B01IDCU,RH2285 Service Data Center Cabinet,IDCU(2*220V)	02114327	1	1,300	2	\$2,600	
S5700S-52P-LI-AC, S5700S-52P-LI-AC, S5700S-52P-LI-AC(48 Ethernet 10/100/1000 ports, 4 Gig SFP, AC 110/220V)	02353835	1	2,451	1	\$2,451	\$883
Basic Configuration,CloudEngine 7800, CE7850-EI-B00, CE7850-32Q-EI Switch (2*600W AC Power Module, 2*FAN Box)	02359250	1	30,528	1	\$30,528	\$10,990
Hardware subtotal					\$786,057	\$33,036



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Software Components						
RedHat Enterprise Linux, English Version, Server Version(2CPU), 6.x, up to 1 guest, 32/64bit, No Document, 3 year 7*24 service	05200360	1	3,112	16	\$49,792	included in RH2288
FusionInsight HD standard edition-1 year Subscription Service-new-per server	88032VYT	1	3,960	16	\$63,360	included
FusionInsight HD standard edition-1 year Subscription Service-renewal-per server	88033CWX	1	3,960	32	\$126,720	included
Software subtotal					\$239,872	
Total					\$1,025,929	\$33,034
Lenovo Thinkvision L2251X black 22" 5ms LCD Monitor	N82E16824146178	2	100	3	300	
Lenovo IGF 0A34032 Ultralim wireless kb & mouse	OZK-003P-00001	2	54	3	162	
Large Purchase Discount		1			-\$551,146	-\$14,395

Pricing: 1 = Huawei, 2 = newegg.com

Discounts: 54% for products and 44% for service. All discounts are based on US list prices and for similar quantities and configurations. The discounts are based on the overall specific

Audited by Francois Raab of InfoSizing, inc.

Three-Year Cost of Ownership \$493,886

HSph@1TB 9.11

\$/HSph@1TB \$54,214

Prices used in TPC benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based on assumptions about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmark specifications. If you find that the stated prices are not available according to these terms, please inform at pricing@tpc.org. Thank you.



Measurement Results for Performance Run

Scale Factor	1TB
Run Start Time	2015-09-08 15:53:29
Run End Time	2015-09-08 16:00:02
Run Elapsed Time	395.000
HSGen Start Time	2015-09-08 15:53:29
HSGen End Time	2015-09-08 15:55:23
HSGen Elapsed Time	114.326
HSSort Start Time	2015-09-08 15:55:26
HSSort End Time	2015-09-08 15:59:11
HSSort Elapsed Time	226.490
HSValidate Start Time	2015-09-08 15:59:15
HSValidate End Time	2015-09-08 16:00:02
HSValidate Elapsed Time	48.000

Measurement Results for Repeatability Run

Run Start Time	2015-09-08 16:01:09
Run End Time	2015-09-08 16:07:40
Run Elapsed Time	395.000
HSGen Start Time	2015-09-08 16:01:09
HSGen End Time	2015-09-08 16:02:57
HSGen Elapsed Time	109.306
HSSort Start Time	2015-09-08 16:03:00
HSSort End Time	2015-09-08 16:06:49
HSSort Elapsed Time	229.372
HSValidate Start Time	2015-09-08 16:06:53
HSValidate End Time	2015-09-08 16:07:40
HSValidate Elapsed Time	48.997



Run Report for Performance Run

```
=====  
TPCx-HS Performance Metric (HSph@SF) Report  
  
Test Run 1 details: Total Time = 395  
                    Total Size = 10000000000  
                    Scale-Factor = 1.0000  
  
TPCx-HS Performance Metric (HSph@SF): 9.1157  
=====
```

Run Report for Repeatability Run

```
=====  
TPCx-HS Performance Metric (HSph@SF) Report  
  
Test Run 2 details: Total Time = 395  
                    Total Size = 10000000000  
                    Scale-Factor = 1.0000  
  
TPCx-HS Performance Metric (HSph@SF): 9.1157  
=====
```