SPC Benchmark 1™

Executive Summary

Fujitsu Limited
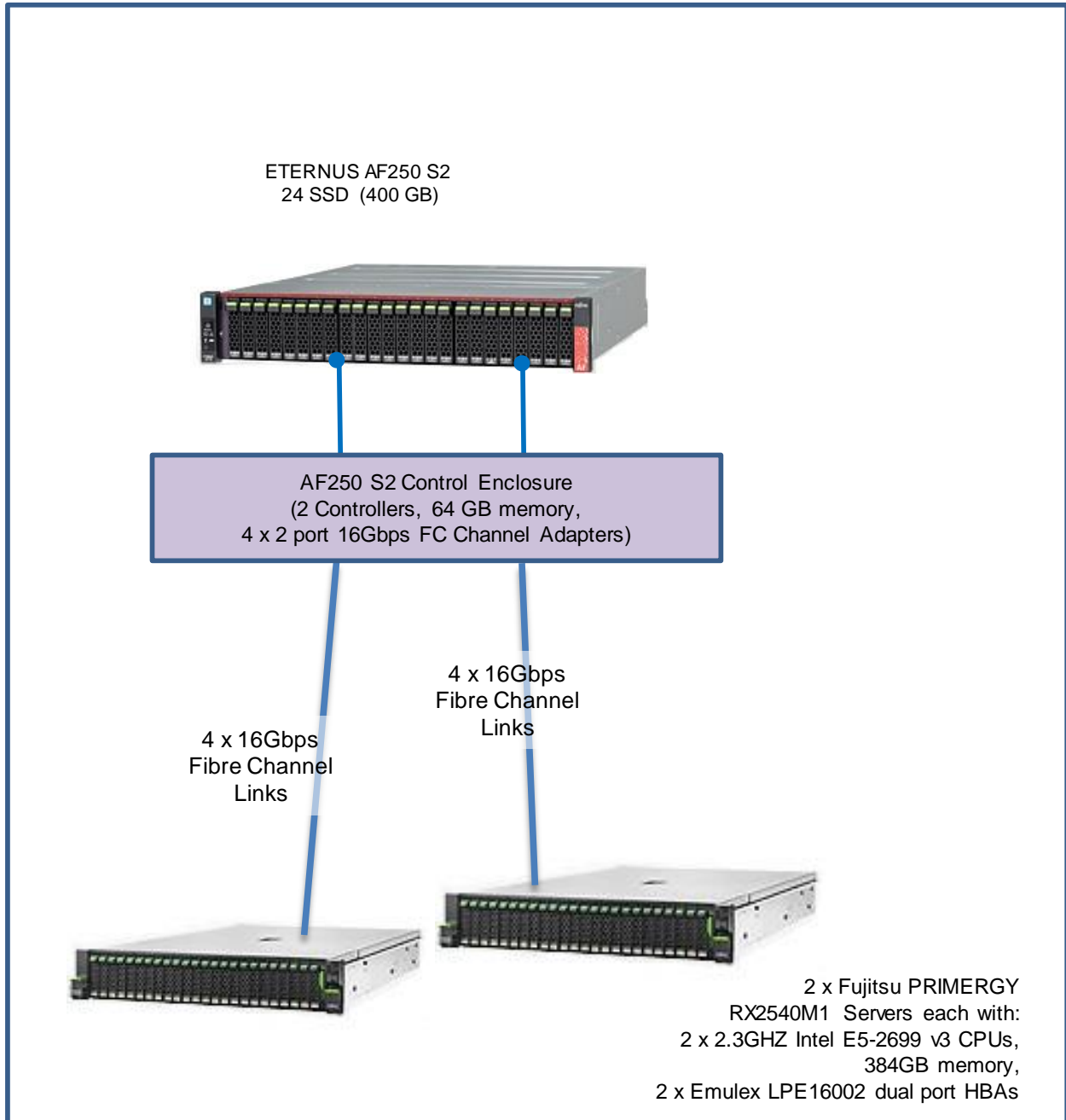## Eternus AF250 S2

SPC-1 IOPS™	360,070
SPC-1 Price-Performance™	**$94.02/SPC-1 KIOPS™**
SPC-1 IOPS™ Response Time	0.673 ms
SPC-1 Overall Response Time	0.361 ms
SPC-1 ASU Capacity	3,435 GB
SPC-1 ASU Price	$9.86/GB
SPC-1 Total System Price	$33,851.38
Data Protection Level	Protected 2 (RAID1)
Physical Storage Capacity	9,600 GB
Pricing Currency / Target Country	U.S. Dollars / USA

SPC-1 V3.5.0

Submission Identifier: A32003

Submitted For Review: November 5, 2017

Benchmark Configuration Diagram

ETERNUS AF250 S2
24 SSD (400 GB)

AF250 S2 Control Enclosure
(2 Controllers, 64 GB memory,
4 x 2 port 16Gbps FC Channel Adapters)

4 x 16Gbps
Fibre Channel
Links

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Fibre Channel
Links

2 x Fujitsu PRIMERGY
RX2540M1 Servers each with:
2 x 2.3GHZ Intel E5-2699 v3 CPUs,
384GB memory,
2 x Emulex LPE16002 dual port HBAs

Tested Storage Product Description

The ETERNUS AF250 S2 is the ideal choice for application scenarios with demanding data and performance requirements. The system delivers impressive IOPS performance with lowest latency even at full load. Thus it offers a solution that resolves all performance issues in critical applications – such as real-time business analytics or VDI environments - without requiring any complicated tuning. It also fits best as general purpose storage for all Tier-1 applications in small and mid-sized companies.

Priced Storage Configuration Components

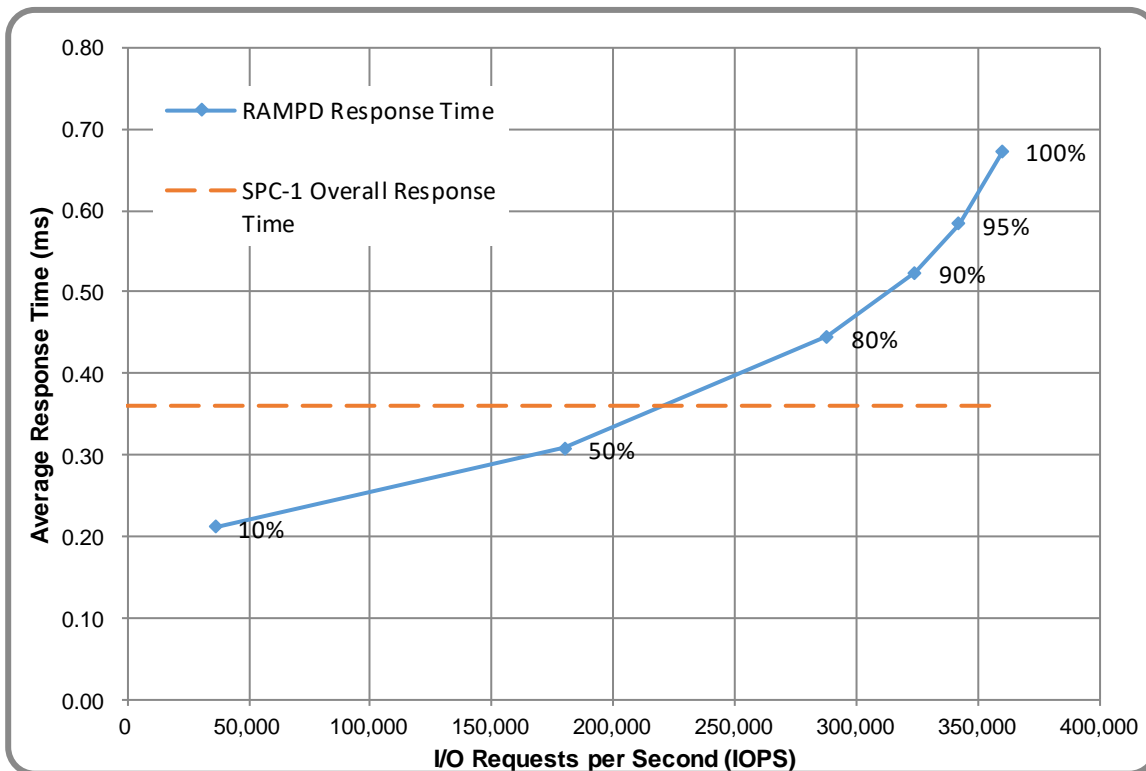| |
|---|
| **4 x Emulex LPE16002 dual port 16 Gb Fibre Channel HBAs** |
| **1 x AF250 S2, with:**
      2 x Controller Modules (CM) each with:
            32 GB cache (64 GB total)
            2 x Channel Adapter (CA) with
                  2 x 16 Gbps Fibre Channel Host Ports
      24 x 400 GB SSD devices (without Hot Spare) |

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Eternus AF250 S2

Storage Configuration Pricing

	Description	Qty	Unit Price	Ext. Price	Disc.	Disc. Price
Hardware						
ET252CU	ETERNUS AF250 S2	1	15,575	15,575	45%	8,596.21
ETVHHFA	Host interface for AF250 S2(16Gbit/s, FC, 4port)	2	3,140	6,280	45%	3,466.08
ETVSAF1	Value SSD(2.5inch) 400GB x1 for AF250 S2	24	1,270	30,480	45%	16,822.63
S26361-F4994-L502	PFC EP LPe16002	4	1,418	5,672	45%	3,130.51
ETFKC05U	AC Power Cords(125V - IEC320-C14, 0.5m)	2	80	160	45%	88.31
61-343827-003	Fibre Channel Host IF Cable LC/LC - 3m	8	132	1,056	45%	582.83
				Hardware Subtotal		**32,686.57**
Support & Maintenance						
	Provide 24 hour per day / 7days per week 4 hour response maintenance for 36 months					
ETAF25-W025360-AED	ETERNUS AF250 Warranty, 36 Months, Standard Level, 9x5 Phone Support, NBD Response	1	0	0	20%	0.00
ETAF25-U004361-AED	ETERNUS AF250 Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7 4hr Onsite, Prepaid billing	1	1,456	1,456	20%	1,164.80
				Support & Maintenance Subtotal		**1,164.80**
SPC-1 Total System Price						**33,851.38**
SPC-1 IOPS™						360,070
SPC-1 Price-Performance™ ($/SPC-1 KIOPS™)						**94.02**
SPC-1 ASU Capacity (GB)						3,435
SPC-1 ASU Price ($/GB)						**9.86**

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

Warranty: The 3-year maintenance and support included in the above pricing meets or exceeds a 24x7 coverage with a 4-hour response time.

Availability Date: January 23, 2018.

Response Time and Throughput Graph

Contact Information	
Test Sponsor Primary Contact	Fujitsu Limited – http://www.fujitsu.com/services/computing/storage Kun Katsumata – kkatsumata@us.fujitsu.com
SPC Auditor	InfoSizing – www.sizing.com Doug Johnson – doug@sizing.com

Revision Information	
SPC Benchmark 1™ Revision	V3.5.0
SPC-1 Workload Generator Revision	v 03.00.2551

Publication Revision History	• First Edition: November 5, 2017
	• Second Edition: February 15, 2018
	    o Updated SPC-1 Price-Performance™ metric based on SPC-1 v3.6.0 definition.
	• Third Edition: April 17, 2018
	    o Correct Committed Data Persistence Implementation description.