

Storage Economics Engagement Customer Summary

INDUSTRY: Utilities – electricity and natural gas
REGION: Americas
BUSINESS SIZE: Enterprise



TRANSFORM VIRTUALIZATION ECONOMICS RELIABLE TRUSTED INNOVATE INFO
 TION GLOBAL CHANGE INTELLIGENT TECHNOLOGY SERVICES VALUE INSIGHT
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USE CASE

Executive Summary

XYZ Inc. is an international energy wholesaler. They manage a data growth rate of 35% and if they continue with business as usual their current storage architecture will have to grow its capacity up to 1.4PB in 5 years' time.

The current storage architecture is divided between 2 physical locations and has hardware from HP, NetApp and SUN. Current cost/terabyte/year is US\$311.11. The main opportunity with XYZ Inc.'s architecture is to consolidate all of their storage arrays into a single storage pool through virtualization, dynamic tier allocation, and thin provisioning.

Moving to an Hitachi Data Systems (HDS) storage platform will result in US\$3,364,397 (46%) savings for XYZ Inc. over 5 years. This solution will reduce cost/terabyte/year from the original US\$311.11 down to US\$185.79.

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Key Financial Metrics

Category	Key Financial Metrics
Investment	US\$5,971,136 (total 5-year investment)
Savings	US\$3,364,397 (total 5-year savings)
Internal Rate of Return (IRR)	-%
Return on Investment (ROI)	11% (Savings/no. of years/investment)

Company Information

Company name	XYZ City
Region	Americas
The country of company headquarters	CONFIDENTIAL
Countries the company operates in:	30
Company size (employees)	85,105
Company size (revenue)	US\$92.86 billion
Industry	Utilities – electricity and natural gas

Business Information (before HDS engagement)

Business overview	CONFIDENTIAL
Corporate vision	CONFIDENTIAL
Corporate goals	<p>Economical</p> <ul style="list-style-type: none"> ■ Capex reduction. ■ Opex reduction. <p>Technical</p> <ul style="list-style-type: none"> ■ Manage 35% data growth.
Challenges	<p>Data growth %</p> <ul style="list-style-type: none"> ■ Underutilization of assets. ■ Labor issue. ■ Monolithic environment. ■ Heterogeneous environment. ■ Data silos. ■ Performance issues. ■ Migration disruption.
Cost sensitivities	NA

Technical Information (before HDS engagement)

Storage hardware

- Typical array lifespan is 5-7 years.
- The current SAN environment consists of a combination of 6 Cisco MDS9509 switches and 4 Brocade DCX Backbone switches. XYZ Inc. is currently in the process of migrating off the Cisco switches. The end result will be 2 DCX switches in each data center.
- We have 3 tiers of storage defined.
 - Tier 1 – HP XP 12000 and XP 24000
 - Tier 2 – HP EVA 8000, EVA 8100 and EVA 8400
 - Tier 3 – NetApp FAS3070 filers NAS
 - The NetApp filers can be used as Tier-2 storage but are currently only being used for Tier 3.
- We use CommVault for backup and restore of tape data.
 - Systems in the Louisville data center are backed up to Simpsonville data center and systems in Simpsonville are backed up to the Louisville data center.
 - Using SUN/StorageTek SL8500 tape libraries and T10000 tape drives.
- Operating systems.
 - All Microsoft® server flavors.
 - HP UX 11.11 and up.
 - Suse Linux Enterprise server 10 and above.
 - Redhat Linux 3 and above.
 - Solaris 10.
 - VMware.
- Databases.
 - Microsoft SQL Server®.
 - Oracle.

Storage peripherals:

- Server models currently in use.
 - HP Proliant DL360, DL380, DL580.
 - IBM X345, X346, X366, X3650.
 - HP RP8400, HP RP5400.
 - STK T10000, STK 9940B.

Asset	Total Size (GB)	Mapped	Allocated	Unused Raw	% Allocated
XP01/Hewlett-Packard/XP12K/10K/SVS200	60,997.22	28,993.16	45,915.98	0	75.3%
XP24000@xp02/Hewlett-Packard/XP24K/20K	66,634.24	24,213.26	31,955.66	0	48.0%
EONUS_EVA3/Hewlett-Packard/HSV210	49,129.70	19,327.00	20,582.00	5,448.23	41.9%
EONUS_EVA4/Hewlett-Packard/HSV210	46,552.79	26,765.02	27,515.02	0	59.1%
EONUS_EVA5-SIM/Hewlett-Packard/HSV200	4,468.91	1,100.00	1,100.00	0	24.6%
EONUS_EVA6/Hewlett-Packard/HSV210	36,421.14	15,535.00	16,637.00	31,432.10	45.7%
EONUS_EVA7/Hewlett-Packard/HSV450	36,862.18	12,615.00	12,615.00	7,543.71	34.2%
Totals	301,066.18	128,548.44	156,320.66	44,424.04	51.9%
Percent Utilization		42.7%	51.9%		

35.00% CAPACITY GROWTH – GB

Tier breakdown	Year 0	Year 1	Year 2	Year 3	Year 4
Tier 1	127,631	172,302	232,608	423,929	572,304
Tier 2	173,435	234,137	316,085	576,065	777,687
Total	301,066	406,439	548,693	999,993	1,349,991

Solution and Services Information (our products and solutions deployed)

The proposed HDS storage solution takes the current partitioned storage architecture and consolidates it into a

single pool. This allows for dynamic management of thin provisioning, virtualization, and tier allocation.

PROJECTED NEW CAPACITY NEED – HDS SOLUTION

	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total
Tier 1	22,274	52,683	92,791	161,600	230,214	257,304
Tier 2	9,096	210,730	356,126	517,995	677,080	785,440
Cost (US\$)	829,707	1,003,177	1,098,302	1,271,555	1,768,395	5,971,136

Resulting Benefits

Savings

	Total Spend (5yr/TB)	Total Savings (5yr/TB)	Total TB after 5 yr.
Business as usual	7,409	0	1,350
Virtualized/tiered/thinned (US\$)	4,045	3,364	907
% Savings	45%	-	33%

	Year 1	Year 2	Year 3	Year 4	Year 5
Business as Usual (US\$)	1,264	1,304	1,372	1,471	1,998
Virtualized/tiered/thinned (US\$)	529	702	797	971	1,046
% Savings (over BaU)	58%	46%	42%	34%	48%

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