

Maintenance costs for Disk space attached to individual servers

Hardware Maintenance Costs (Yearly)

IBM 640 = \$ 32304
 IBM 720 = \$22809
 Total \$55113

The costs attributed to Disk Storage is 66 % of total Maintenance Costs which is \$36375 per year
 As disk space increases by 20 % maintenance costs will increase appropriately

Labour Costs (Yearly)

System Administrator \$70932 a year * .4 = \$28374 a year (Assume .4 of FTE)

<u>Year</u>	<u>Hardware Costs</u>	<u>Labour</u>	<u>Total Costs</u>
2003	43650	28374	72024
2004	52380	28374	80754
2005	62856	28374	91230
2006	75427	28374	103801
2007	90512	28374	118886
2008	108614	28374	136988
2009	130336	28374	158710
2010	156403	28374	184777

Maintenance costs for buy Enterprise Storage System (SAN Technologies)

Hardware Maintenance Costs (Yearly)

Annual Maintenance Costs is \$51420

Labour Costs (Yearly)

System Administrator \$70932 a year * .2 = \$14186 a year (Assume .2 of FTE)

<u>Year</u>	<u>Hardware Costs</u>	<u>Labour</u>	<u>Total Costs</u>
2003	51420	14186	62470
2004	51420	14186	62470
2005	54540	14186	67390
2006	54540	14186	67390
2007	57660	14186	71846
2008	57660	14186	71846
2009	57660	14186	71846
2010	57660	14186	71846

Assumptions

IN 2004 60% of all disk space is replaced due to servers being replaced
 in 2007 60 % of disk space is replaced due to servers being replaced
 in 2009 60 % of disk space is replaced due to servers being replaced

Enterprise Storage Infrastructure

Exhibit ED-1
NLH 2003 Capital Budget
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Study Discount Rate: 9.00%

Year	Individual Storage				ESS Storage Infrastructure				NPV Comparison (Alt. 2 - Alt. 1)	
	Capital Costs	O&M Costs	Total	CPW to 2003	Capital Costs	O&M Costs	Total	CPW to 2003	CPW to 2003	
2003	226,600	72,074	298,674	298,674	1,335,114	62,470	1,397,584	1,397,584	\$	1,098,910
2004	933,592	80,754	1,014,346	1,229,267		62,470	62,470	1,454,896	\$	225,629
2005	480,799	91,230	572,029	1,710,732	617,000	67,390	684,390	2,030,933	\$	320,201
2006	247,611	103,801	351,412	1,982,087		67,390	67,390	2,082,971	\$	100,884
2007	510,080	118,886	628,966	2,427,662	617,000	71,846	688,846	2,570,967	\$	143,305
2008	262,691	136,988	399,679	2,687,426		71,846	71,846	2,617,662	\$	(69,764)
2009	1,082,286	158,710	1,240,996	3,427,391	617,000	71,846	688,846	3,028,398	\$	(398,993)
2010	220,000	184,777	404,777	3,648,818	*-	71,846	71,846	3,067,700	\$	(581,118)