

# Sever Platform Migration and Consolidation Business Case Executive Summary

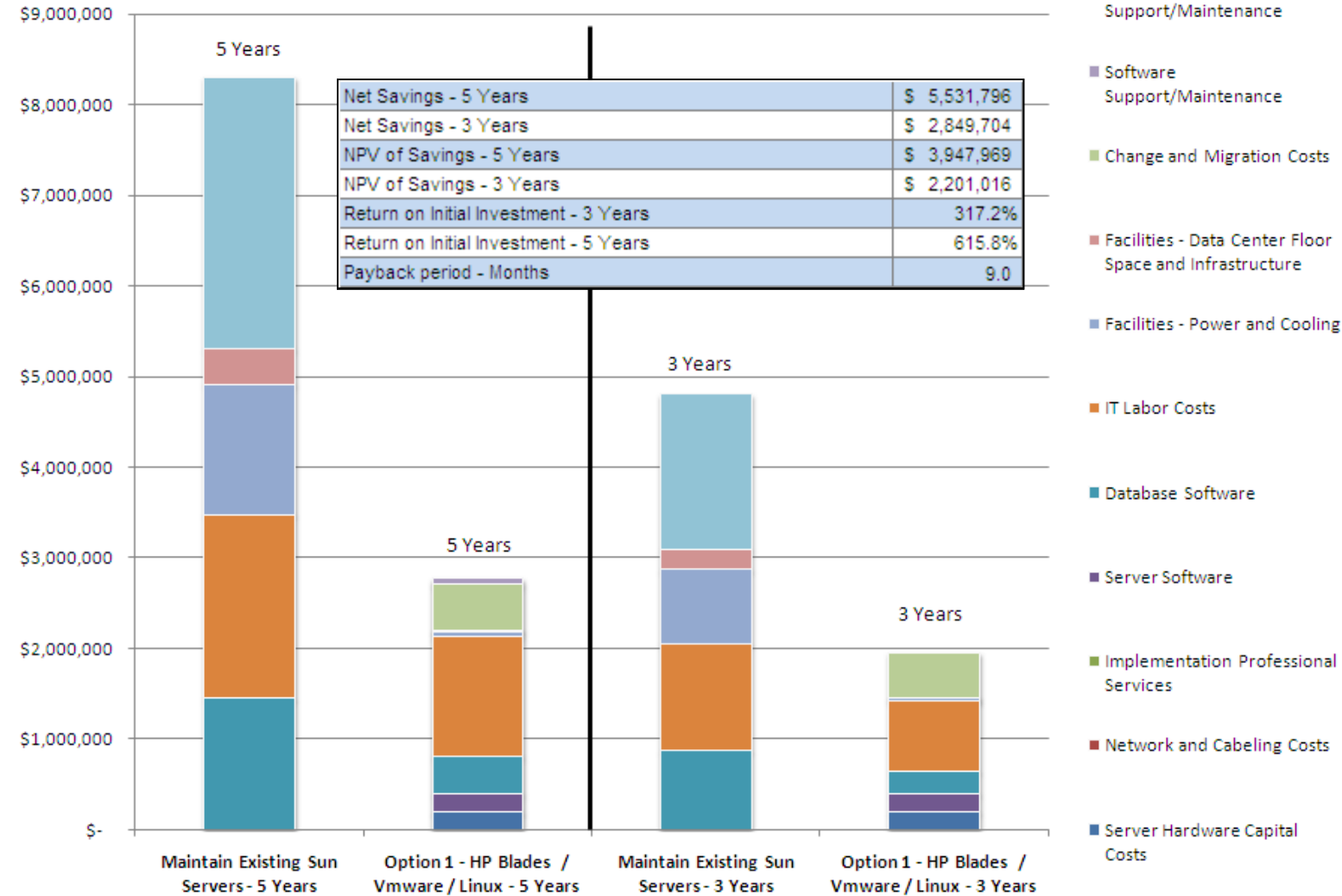
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Industry:	Government		

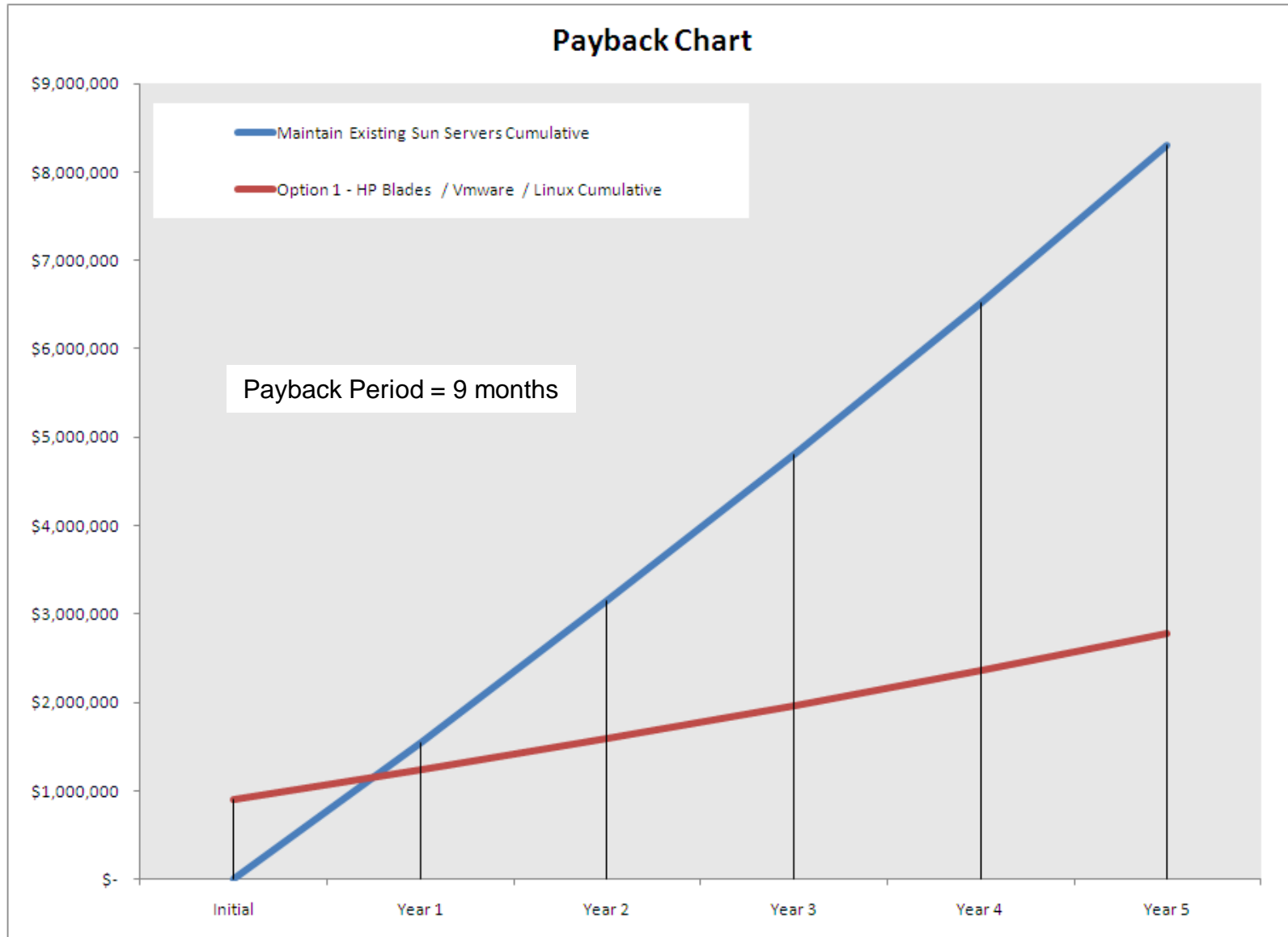
- “ Approach:
  - . Compare the estimated Total Cost of Ownership (TCO) over 5 years of operating current Sun servers vs. virtualizing and consolidating via Blade servers, vSphere 4, and Redhat Linux.
  
  - . The following cost categories are being explored:
    - “ Server acquisition and support costs
    - “ Virtualization and OS software acquisition and support costs
    - “ Oracle database costs
    - “ Power, cooling and data center infrastructure costs
    - “ IT labor costs
    - “ Change/Migration costs
  
  - . Costs and factors not quantified in the analysis:
    - “ Network infrastructure and management
    - “ Data storage (using existing assets for the project)
    - “ Systems uptime
    - “ Benefits of advanced virtualization features

## “ Key Assumptions:

- . 3 and 5 year cash flows included.
- . Migrate 132 Sun/Solaris physical servers to 16 HP/Vmware/Linux physical servers.
- . Estimate 9 to 1 average consolidation ratio.
- . Annual Sun support costs from Idea International with 50% discount.
- . Sun rack space and power numbers from Ideas International.
- . Annual cost per Square Ft of data center = \$136 based on Alinean/IDC research.
- . Oracle costs from Oracle pricing schedules. Used GSA pricing for Enterprise Lic.
- . Reduction in Oracle based on core consolidation of 3.5 to 1.
- . Number of Oracle licenses based on current server cores running Oracle DBs.
- . IT labor costs based on Alinean/IDC research.
- . Average cost per kWatt hour = \$0.10.
- . Annual growth in maintenance costs = 5.00%.
- . Annual growth in electricity costs = 5.00%.
- . Annual growth in data center infrastructure costs = 5.00%.
- . 16 HP Blade server/enclosure cost = \$180,797 (with 5 yrs support) .
- . Vmware and HP management software cost = \$162,471 (with 3 yrs support).
- . Estimated Linux licensing cost = \$38,160 with 3 years of support.
- . Estimated migration from Solaris to Linux = \$500,000.

## Total Cost Comparisons 3 and 5 Years







# Server Consolidation Business Case



Maintain Existing Sun Servers							
	Initial	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total
Server Hardware Capital Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Network and Cabeling Costs	-	-	-	-	-	-	-
Implementation Professional Services	-	-	-	-	-	-	-
Server Software	-	-	-	-	-	-	-
Database Software	-	289,403	289,403	289,403	289,403	289,403	1,447,013
IT Labor Costs	-	382,319	393,789	405,603	417,771	430,304	2,029,786
Facilities - Power and Cooling	-	260,012	273,013	286,663	300,996	316,046	1,436,730
Facilities - Data Center Floor Space and Infrastructure	-	71,400	74,970	78,719	82,654	86,787	394,530
Change and Migration Costs	-	-	-	-	-	-	-
Software Support/Maintenance	-	-	-	-	-	-	-
Hardware Support/Maintenance	-	542,300	569,415	597,886	627,780	659,169	2,996,550
<b>Totals</b>	<b>\$ -</b>	<b>\$ 1,545,434</b>	<b>\$ 1,600,589</b>	<b>\$ 1,658,273</b>	<b>\$ 1,718,604</b>	<b>\$ 1,781,709</b>	<b>\$ 8,304,609</b>
Cumulative	\$ -	\$ 1,545,434	\$ 3,146,023	\$ 4,804,296	\$ 6,522,900	\$ 8,304,609	

Option 1 - HP Blades / Vmware / Linux							
	Initial	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total
Server Hardware Capital Costs	\$ 194,685	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 194,685
Network and Cabeling Costs	-	-	-	-	-	-	-
Implementation Professional Services	-	-	-	-	-	-	-
Server Software	203,585	-	-	-	-	-	203,585
Database Software	-	82,686	82,686	82,686	82,686	82,686	413,432
IT Labor Costs	-	247,908	255,345	263,005	270,895	279,022	1,316,175
Facilities - Power and Cooling	-	9,924	10,420	10,941	11,488	12,063	54,837
Facilities - Data Center Floor Space and Infrastructure	-	3,400	3,570	3,749	3,936	4,133	18,787
Change and Migration Costs	500,000	-	-	-	-	-	500,000
Software Support/Maintenance	-	-	-	-	35,656	35,656	71,312
Hardware Support/Maintenance	-	-	-	-	-	-	-
<b>Totals</b>	<b>\$ 898,270</b>	<b>\$ 343,919</b>	<b>\$ 352,022</b>	<b>\$ 360,381</b>	<b>\$ 404,662</b>	<b>\$ 413,560</b>	<b>\$ 2,772,813</b>
Cumulative	\$ 898,270	\$ 1,242,188	\$ 1,594,210	\$ 1,954,591	\$ 2,359,253	\$ 2,772,813	



# Server Consolidation Business Case



Difference							
	Initial	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total
Server Hardware Capital Costs	\$ (194,685)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (194,685)
Network and Cabeling Costs	-	-	-	-	-	-	-
Implementation Professional Services	-	-	-	-	-	-	-
Server Software	(203,585)	-	-	-	-	-	(203,585)
Database Software	-	206,716	206,716	206,716	206,716	206,716	1,033,581
IT Labor Costs	-	134,411	138,444	142,598	146,876	151,282	713,611
Facilities - Power and Cooling	-	250,088	262,592	275,722	289,508	303,983	1,381,894
Facilities - Data Center Floor Space and Infrastructure	-	68,000	71,400	74,970	78,719	82,654	375,743
Change and Migration Costs	(500,000)	-	-	-	-	-	(500,000)
Software Support/Maintenance	-	-	-	-	(35,656)	(35,656)	(71,312)
Hardware Support/Maintenance	-	542,300	569,415	597,886	627,780	659,169	2,996,550
<b>Total</b>	<b>\$ (898,270)</b>	<b>\$ 1,201,515</b>	<b>\$ 1,248,567</b>	<b>\$ 1,297,892</b>	<b>\$ 1,313,943</b>	<b>\$ 1,368,149</b>	<b>\$ 5,531,796</b>
Cumulative	\$ (898,270)	\$ 303,245	\$ 1,551,813	\$ 2,849,704	\$ 4,163,647	\$ 5,531,796	
Net Savings - 5 Years	\$ 5,531,796						
Net Savings - 3 Years	\$ 2,849,704						
NPV of Savings - 5 Years	\$ 3,947,969						
NPV of Savings - 3 Years	\$ 2,201,016						
Return on Initial Investment - 3 Years	317.2%						
Return on Initial Investment - 5 Years	615.8%						
Payback period - Months	9.0						
Payback period - Years	0.75						
Discount Rate Used for NPV	10.0%						