

Costs of Adding a New Server	Quantity	Assumptions	Typical Unit Costs		Customer Costs over 3 years
			One time costs per Unit	Annual Costs	3 year total Costs
<b>Hardware</b>					
new hardware - 1U servers	1	new 1U type server (	3500	3500	3500
new hardware - 3U servers	0	new 3U type server (	4300	0	0
new Desktops/Laptops	0	3Ghz PC with 3GB + r	1500	0	0
new storage array - 10 drives	0	MSA70 type array wi	5600	0	0
Fiber Channel HBA's	0	1 HBA per server	1000	0	0
Fiber channel switch ports	0	16 ports per switch	63	0	0
SAN fiber channel ports	0	16 ports per switch	63	0	0
NAS capacity	1	10 servers per NAS	1500	1500	1500
Ethernet GigE Switch capacity	1	48 ports servers per	113	113	113
new server racks	1	8 servers to a rack	200	200	200
UPS for 10 minute capacity per server	1	1 APC SUA1000 UPS	459	459	459
new power distribution strips	1	8 servers can share P	50	50	50
rack cooling fans	1	8 servers can share P	88	88	88
new Air Conditioning capacity	1	1 unit for 20 servers	500	500	500
1U Air Cond operating costs (assume equal to server power costs)	1	491 watts @ \$.12 pe	0	516	1548
3U Air Cond operating costs (assume equal to server power costs)	0	536 watts @ \$.12 pe	0	0	0
Electricity Costs for 1U server (DL 360, 2 CPU, 4GB, 3 NIC,1 SAS raid, 2 146GB drives, 2 pwr supplies) by HP power calculator	1	491 watts @ \$.12 pe	0	516	1548
Electricity Costs for 3U server (DL 380, 2 CPU, 4GB, 3 NIC,1 SAS raid, 2 146GB drives, 2 pwr supplies) by HP power calculator	0	536 watts @ \$.12 pe	0	0	0
additional computer room space	0	assume space is avai	0	0	0
KVM (Keyboard/Video/Mouse) switch	1	16 servers can share	70	70	70
additional cables (Ethernet, power, KVM, etc.)	1	Misc cables	200	200	200
costs to install new power cables	1	1 20A circuit installat	100	100	100
Backup costs - tapes	1	15 SDLT backup tape	1125	1125	3375
Backup costs - disk to disk	0	Network Attached St	1500	0	0
<b>Total estimated hardware costs with 7% sales tax</b>				<b>8937</b>	<b>14179</b>
			Typical Unit Costs		Customer Costs over 3 years

