



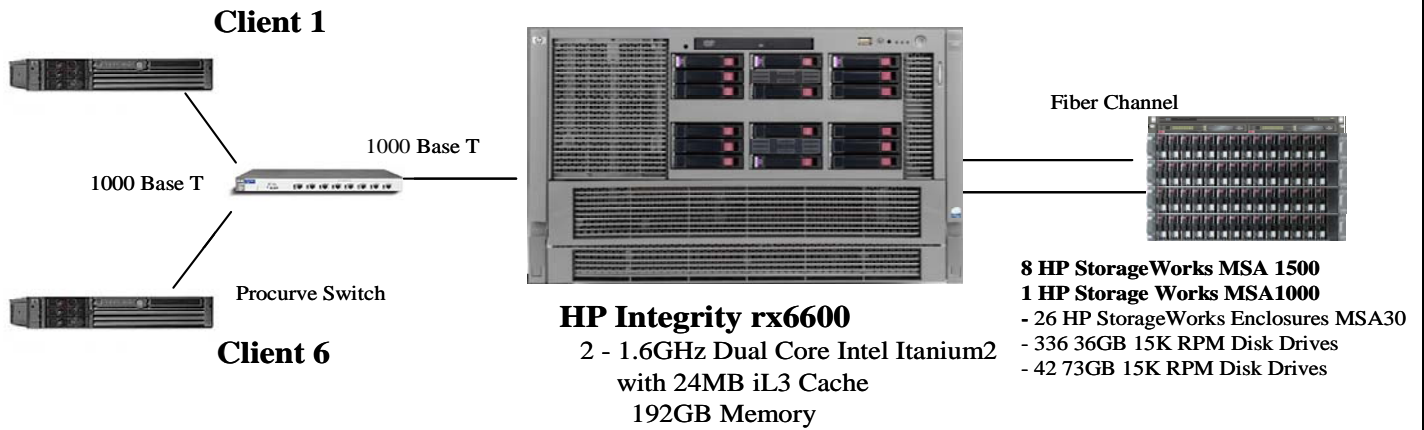
HP Integrity rx6600

TPC-C Revision 5.7

Report Date:
August 15, 2006

Total System Cost	TPC Throughput	Price/Performance	Availability Date
\$606,689	230,569 tpmC	\$2.63/tpmC	December 1, 2006
Server Processors/Cores/Threads	Database Manager	Operating System	Other Software
2/4/8 Dual-Core Intel Itanium2 1.6GHz	Oracle Database 10g Enterprise Edition	HP-UX 11.i v2 64-bit	TUXEDO 8.0
			Number of Users
			183,360

Server



System Components	Server (HP Integrity rx6600)		each Client (6 rx2620)	
	Qty	Type	Qty	Type
Processors/Cores/Threads	2/4/8	1.6GHz Dual-Core Intel Itanium2	2/2/2	1.3GHz Intel Itanium2
Cache Memory	2	24MB iL3 Cache	each	3M iL3 cache
Memory	192	GB	8	GB
Disk Controllers	2	Dual-Port PCI Fibre Channel 4X	1	Ultra2 SCSI LVD
Disk Drives	8	HP StorageWorks Modular Smart Array 1500 with 336 36GB 15K RPM	1	36 GB
	1	HP StorageWorks Modular Smart Array 1000 with 42 73GB 15K RPM		
Total Storage	2	Internal 36GB/10kpm SAS hard disk drives 12826 GB		
Tape Drives	1	DVD ROM		
Terminals	1	HP Server Thin Client	1	Console Terminal



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Description	Part Number	Brand	Price Key	US List Price	Qty	Price	3Year Main.Price
Server Hardware							
HP Integrity rx6600 Base System with 2 1.6GHz/24MB Dual-Core Processor Modules (incl dual-port 1000B-T adapter, 1 power supply)	AD132A, Opt 180**		1	27,350	1	27,350	
I/O backplane	AD296A**		1	0	1	0	
48-DIMM memory carrier board	AD127A**		1	4,495	1	4,495	
36GB/10kpm SAS hard disk drive	AD140A**		1	382	2	764	
DVD-ROM slimline drive	AD142A**		1	230	1	230	
16GB memory quad (4x4GB DIMMS)	AB566A**		1	18,977	12	227,724	
3 Year Svc & Support Price (Hardware and Software)	HA110A3**						\$13,551
PCI 4GB Fibre Channel Adapter (dual port)	AB379A		1	3,995	2	7,990	
Redundant Power Supply	AD9524A		1	749	1	749	
HP Server Thin Client (monitor, keyboard/mouse, cable i	AB300B		1	1,250	1	1,250	
Rack Model 5642	358254-B21		1	689	1	689	
				Subtotal		271,241	13,551
Server Software							
Oracle Database 10g Enterprise Edition, Per Processor Unlimited Users, 3 years	Runtime**	Oracle	2	20,000	2*	40,000	
Oracle Database Server Support Package for 3 years		Oracle	2	2,000	3		6,000
HP-UX 11i v2 Foundation Operating Environment	BA503AC**		1	995	4	3,980	
HPUX Factory Integrated	B9106AA, Opt 0D1**		1	199	1	199	
				Subtotal		44,179	6,000
Storage							
Rack System/E R3000 XR UPS	AF422A		1	1,366	5	6,830	
HP StorageWorks SAN switch 2/8V	AA979A		1	4,149	3	12,447	
2meter Fibre Optic Cable	221691-B21		1	77	8	616	
5 meter Fibre Optic Cable	221691-B22		1	82	4	328	
HP StorageWorks MSA 1500	AA986A		1	8,995	8	71,960	17,416
HP StorageWorks MSA 1000	201723-B22		1	6,995	1	6,995	3,222
HP StorageWorks MSA 1000 Controller	218231-B22		1	4,290	1	4,290	
HP StorageWorks Enclosures MSA30 (26 + 3 spares)	302969-B21		1	2,829	29	82,041	
36GB 15K Ultra320 Hard Drive (336 + 34 spares)	286776-B22		1	269	370	99,530	
73GB 15K Ultra320 Hard Drive	286778-B22		1	399	14	5,586	Included
73GB 15K Ultra320 Hard Drive (28 + 3 spares)	286778-B22		1	399	31	12,369	
10642 (42U) Rack Cabinet	245161-B21		1	1,359	3	4,077	
200 - 240 volts North America	A5137AZ AW4		1	94	12	1,128	
				Subtotal		308,197	20,638
Client Hardware							
HP server rx2620 w 1.3GHz Intel Itanium 2 Processor	AB333A		1	3,795	6	22,770	
1.3GHz Intel Itanium 2 Processor	AB336A		1	1,650	6	9,900	
3 Year Support Price (Hardware & Software)	HA110A3						27,294
36GB 15K RPM Ultra320 SCSI Internal Disk	AD186A		1	389	6	2,334	
4GB Memory Module (4 x 1GB DIMMS)	AB397A		1	2,550	12	30,600	
HP Server Thin Client (monitor, keyboard/mouse, cable i	AB300B		1	1,250	1	1,250	
HP CAT5 Lan Cables (qty 4)	263474-B24		1	29	2	58	
10642 (42U) Rack Cabinet	245161-B21		1	1,359	1	1,359	
200-240 Volts Power Option	A5137AZ, Opt AW4		1	94	4	376	
HP-UX Fndn OE DVD Media	B9106AA, Opt. AJR		1	565	6	3,390	
HP-UX Fndn OE DVD Media, Factory Integrated	B9106AA, Opt. OD1		1	199	6	1,194	
HP-UX Fndn OE Integrity PPL max2CPU w/sys	B9430AC		1	995	12	11,940	
				Subtotal		85,171	27,294
Client Software							
HP C++/ANSI C Developer's Bundle	B9007AA, Opt. 2AH		1	966	1	966	256
BEA Tuxedo 8.0		Bea Sys.	3	1,200	6	7,200	4,536
				Subtotal		8,166	4,792
User Connectivity							
HP ProCurve Switch 2724	J4897A		1	1,599	1	1,599	636
				Subtotal		1,599	636
				BEA 5% Mandatory Discount		(360)	
				Oracle Mandatory E-Business Discount		(2,300)	
				HP's Large configuration Discount and Support Prepayment*		(\$164,184)	(\$17,930)
				Total		551,709	54,981
* 2 = 0.50 * 4. Explanation: For the purposes of counting the number of processors which require licensing, an Intel multicore chip with "n" cores shall be determined by multiplying "n" cores by a factor of 0.50.							
** These components are not immediately orderable. See the FDR for more information.							
*A 24.8% discount was based on the overall value of the specific components from HP (Price Key) in this single quotation. Discounts for similarly sized configurations will be similar to those quoted here, but may vary based on the components in the quotation.							
1=HP 2= Oracle (Pricing Contact: MaryBeth Pierantoni (see Appendix F) 3=BEA Systems						Three Year Cost of Ownership:	\$606,689
4=HP's Large Quantity Pricing						tpmC Rating:	230,569
Audited by Lorna Livingtree of Performance Metrics, Inc.						\$/tpmC:	\$2.63
Prices used in TPC benchmarks reflect actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based on assumptions about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmark specifications. If you find that the stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you.							

Numerical Quantities Summary for HP Integrity rx6600

MQTH, Computed Maximum Qualified Throughput

230,569 tpmC

Response Times (in seconds)

	90th %-ile	Maximum	Average
New-Order	0.65s	9.15s	0.34s
Payment	0.65s	9.66s	0.33s
Order-Status	0.66s	8.45s	0.34s
Delivery (interactive portion)	0.26s	8.23s	0.14s
Delivery (deferred portion)	0.65s	8.86s	0.34s
Stock-Level	0.65s	8.41s	0.33s
Menu	0.10s	4.34s	0.07s

Transaction Mix, in percent of total transactions

New-Order	44.94%
Payment	43.02%
Order-Status	4.01%
Delivery	4.02%
Stock-Level	4.01%

Keying/Think Times

	Keying Time			Think Time		
	Min	Avg	Max	Min	Avg	Max
New-Order	18.02s	18.03s	18.24s	0.02s	12.14s	191.16s
Payment	3.02s	3.03s	3.26s	0.02s	12.07s	193.48s
Order-Status	2.02s	2.03s	2.24s	0.02s	10.12s	147.84s
Delivery (interactive)	2.02s	2.03s	2.24s	0.02s	5.07s	72.98s
Stock-Level	2.02s	2.03s	2.24s	0.02s	5.07s	72.48s

Test Duration

Ramp up time	84 minutes
Measurement interval	120 minutes
Transactions during measurement interval	61,564,078
Ramp down time	6.327 minutes

Checkpointing

Number of checkpoints in measurement interval	4
Checkpoint Interval	29.6 minutes