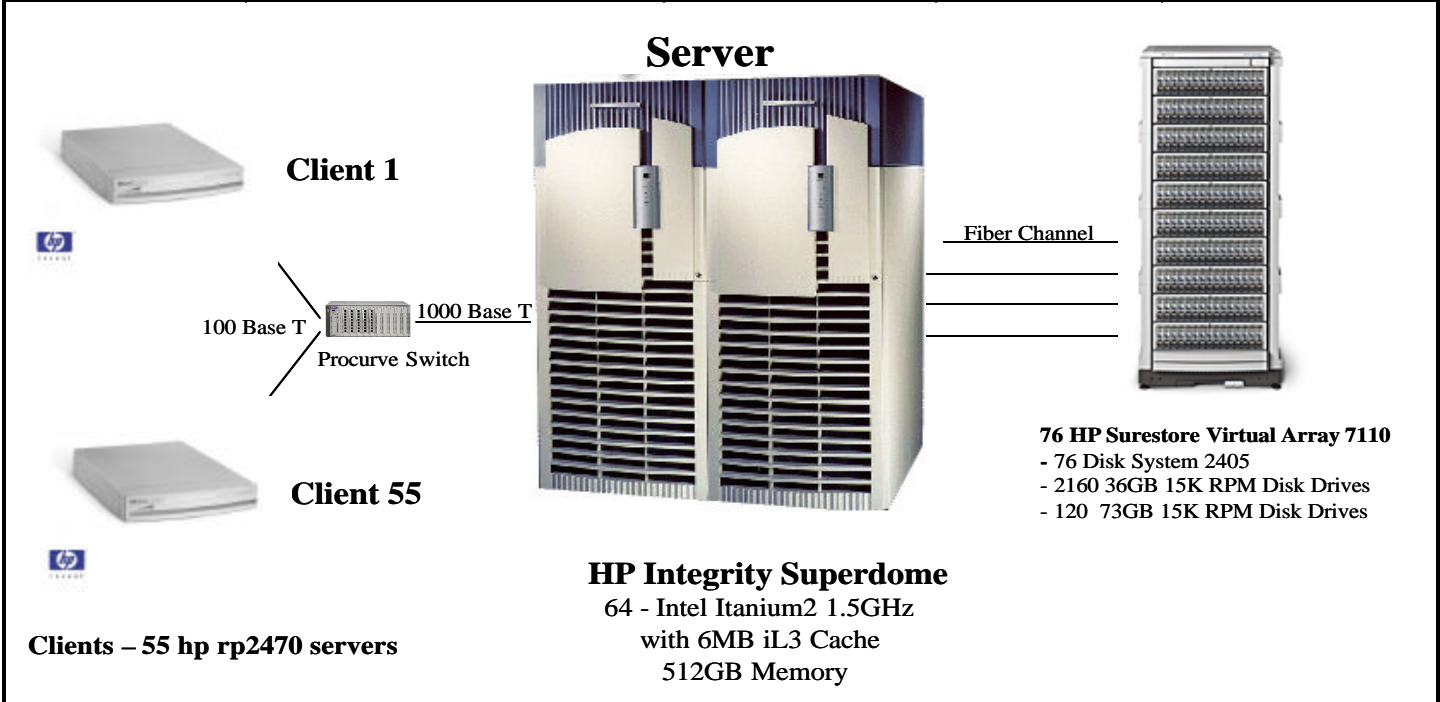
	HP Integrity Superdome			TPC-C Revision 5
				Report Date: December 31, 2003
Total System Cost	TPC Throughput	Price/Performance		Availability Date
\$6,825,055	824,164.53 tpmC	\$8.28/tpmC		January 30, 2004
Processors	Database Manager	Operating System	Other Software	Number of Users
64 Itanium2 1.5GHz	Oracle Database 10G Enterprise Edition	HP-UX 11.i, v2 64-bit	TUXEDO 8.0	648,340



System Components	Server (HP Integrity Superdome)		each Client (55 rp2470)	
	Qty	Type	Qty	Type
Processors	64	1.5GHz Itanium2	1	750MHz PA-RISC 8700
Cache Memory	each	6MB iL3 Cache	each	.75MB I-cache/1.5 MB D-cache
Memory	512	GB	3	GB
Disk Controllers	28	PCI Fibre Channel 2X	1	Ultra2 SCSI LVD
Disk Drives	76	Surestore Virtual Array 7110 with 2160 36GB 15K RPM with 120 73GB 15K RPM	1	36 GB
Total Storage	26,508	GB		
Tape Drives	1	DVD ROM		
Terminals	1	Console Terminal	1	Console Terminal



HP Integrity Superdome

TPC-C Rev 5

Report Date: December 31, 2003

Description	Part Number	Brand	Key	Price US List	Qty	Price	3Year Main.Price
Server Hardware							
Super Dome left chassis	A5201A, Opt. 429			1 205,840	1	205,840	
Super Dome right chassis	A5202A, Opt. 429			1 218,435	1	218,435	
IPF Superdome Cell Board (sx1000)	A6866A			1 16,000	16	256,000	
3 Year Svc & Support Price (Hardware and Operating System)							836,072
4GB SDRAM (4x1GB DIMMS)	A6863A			1 17,750	128	2,272,000	
PCI-x I/O chassis	A6864A			1 16,805	3	50,415	
Core I/O Card	A6865A			1 1,045	1	4,270	
CPU Itanium 2, 1.5GHz w/6MB iL 3 cache (2 CPUs)	A6924A			1 40,000	32	1,280,000	
PCI 1000BT Lan Adapter	A6847A, Opt. 0D1			1 2,135	2	2,135	
PCI 2GB Fibre Channel Adapter	A6795A			1 2,240	28	62,720	
Rack Installation Kit	A5170A, Opt. 0D1			1 410	1	410	
TA5300 Enclosure for DAT tape	C7508AZ			1 1,395	1	1,395	
DDS 4 tape	C5687B			1 1,450	1	1,450	
DVD Rom drive	C7499A			1 688	1	688	
Proliant ML350 G3 (SMS for Orca)	A9802A			1 6,500	1	6,500	
				Subtotal		4,361,168	836,072
Server Software							
Oracle Database 10G Enterprise Edition	Runtime						
Per Processor for 3 years, Unlimited Users		Oracle		2 20,000	64	1,280,000	
Oracle Database Server Support Package for 3 years				2 6,000	1		6,000
HP-UX 11i, V2 Foundation Operating Environment	B9429AC			1 2,370	64	151,680	
Foundation Operating Environment Media Kit	B9166AA, Opt AJR			1 565	1	565	
				Subtotal		1,432,245	6,000
Storage							
Rack System/E R3000 XR UPS	J4367A			1 1,948	31	60,388	
2 meter Fibre Optic Cable	A7524A			1 215	152	32,680	
16 meter Fibre Optic Cable	A7525A			1 260	28	7,280	
Surestore VA 7110 w/ dual controller, 512 memory*	A7294AZ			4 25,440	76	1,933,440	
3 Year Support Price							331,740
Disk System 2405 with dual 2GB link cards	A6250AZ			1 6,595	76	501,220	
36GB 15K RPM FC HDD*	A6193A, Opt 0D1			4 877	2,160	1,893,996	
36GB 15K RPM FC HDD. (10% spares)*	A6193A, Opt 0D1			4 877	216	190,276	
73GB 15K RPM FC HDD.	A7288A, Opt 0D1			1 2,619	120	314,280	
73GB 15K RPM FC HDD. (10% spares)	A7288A, Opt 0D1			1 2,619	12	34,047	
8 Port Short Wave Fibre Channel Hub	A7346A			1 6,599	24	158,376	
HP9000 Std. Rack System E41	A4902A			1 1,910	13	24,830	
Modular Power Dist.	A5137AZ			1 145	52	7,540	
200-240 Volts Power Option	4564232AZ			1 94	52	4,888	
				Subtotal		5,163,241	331,740
Client Hardware							
HP server rp2470	A6890A			1 1,865	55	102,575	
750Mhz PA-RISC 8700 CPU	A6892A			1 4,500	55	247,500	
3 Year Support Price (Hardware & Software)							244,365
36GB 15K HotPlug Ultra 160 SCSI Internal Disk	A6948A			1 1,298	55	71,390	
1GB Memory Module	A5841A			1 1,900	165	313,500	
100BT Lan Adapter	A5230A			1 495	55	27,225	
HP-UX 11.i Sys Media, CD-ROM	B3920EA, Opt. AAF			1 520	55	28,600	
				Subtotal		790,790	244,365
Client Software							
HP C/ANSI C Compiler	B3901BA, Option AH0			1 1,600	1	1,600	170
BEA Tuxedo 8.0	Bea Sys.			3 1,140	55	62,700	41,580
				Subtotal		64,300	41,750
User Connectivity							
HP ProCurve Switch 4000M	J4121A			1 2,379	1	2,379	
HP ProCurve Switch Gigabit-SX Module	J4113A			1 1,189	2	2,378	588
				Subtotal		4,757	588
Oracle Mandatory E-Business Discount (license and support)				2 (321,500)	1	(321,500)	
HP's Large configuration Discount and Support Prepayment*						(\$5,449,576)	(\$680,886)
*All discounts are based on US list prices and for similar quantities and configurations				Total		6,045,426	779,629
1=HP 2= Oracle (Pricing Contact: MaryBeth Pierantoni (see Appendix F) 3=BEA Systems						Three Year Cost of Ownership:	\$6,825,055
4=HP's Large Quantity Pricing						tpmC Rating:	824,164.53
Audited by Lorna Livingtree for Performance Metrics, Inc.						\$/tpmC:	\$8.28

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.

***HP's Large Quantity Pricing:** In addition to any large volume discount, a discount of 50% will be given for VA7110 if quantity is greater than 70 and an additional 35% discount on 36GB disks if quantity is greater than 1000.

Description	Part Numbe	Brand	Price Key	US List Price
Surestore VA7110			4	\$50,880
HP's Large Quantity Discount (50%)				(\$25,440)
New Surestore VA7110 Large Quantity List Price				\$25,440
36GB 15K FC HDD			4	\$1,349
HP's Large Quantity Discount (33%)				(\$472)
New 36GB 15K FC HDD Large Quantity List Price				\$877

Numerical Quantities Summary for HP Integrity Superdome

MQTH, Computed Maximum Qualified Throughput

824,164.53 tpmC

Response Times (in seconds)

	90th %-ile	Maximum	Average
New-Order	0.20s	12.01s	0.11s
Payment	0.19s	11.94s	0.12s
Order-Status	0.19s	10.87s	0.12s
Delivery (interactive portion)	0.08s	9.70s	0.08s
Delivery (deferred portion)	0.19s	10.31s	0.10s
Stock-Level	0.27s	10.63s	0.15s
Menu	0.00s	0.00s	0.000s

Transaction Mix, in percent of total transactions

New-Order	44.96%
Payment	43.01%
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	18.27s	0.01s	12.13s	217.35s
Payment	3.01s	3.02s	3.26s	0.01s	12.07s	223.46s
Order-Status	2.01s	2.02s	2.25s	0.01s	10.12s	166.83s
Delivery (interactive)	2.01s	2.02s	2.23s	0.01s	5.06s	82.9s
Stock-Level	2.01s	2.02s	2.26s	0.01s	5.06s	76.21s

Test Duration

Ramp up time	64 minutes
Measurement interval	136 minutes
Transactions during measurement interval	249,300,519
Ramp down time	40.347 minutes

Checkpointing

Number of checkpoints in measurement interval	5
Checkpoint Interval	27.24 minutes