



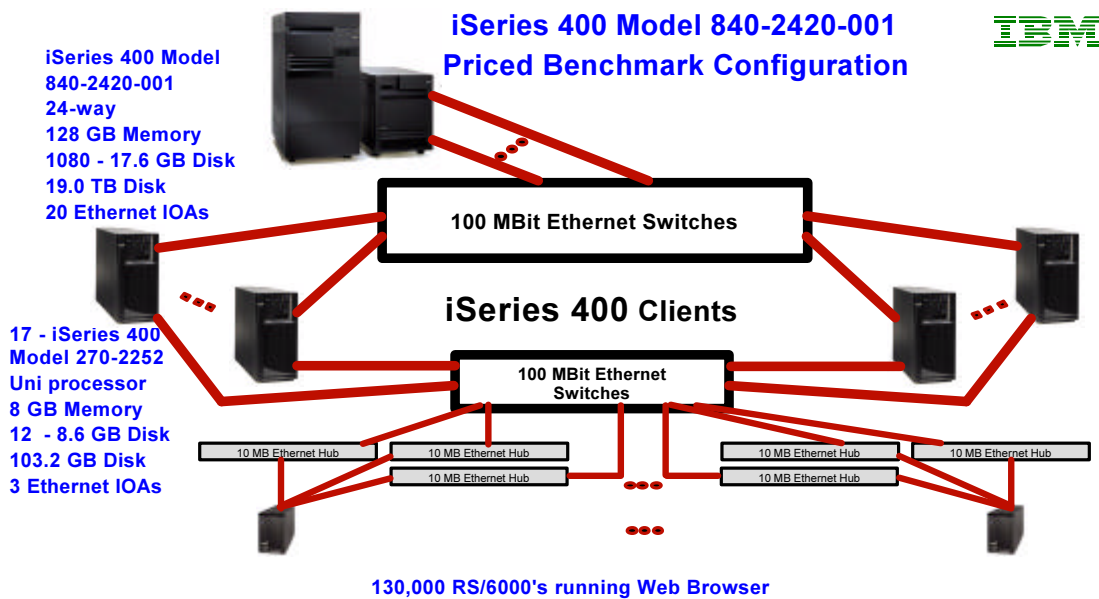
IBM® server iSeries 400 Model 840-2420-001

TPC-C Rev. 3.5

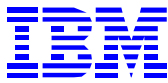
Report Date:
October 24, 2000

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
\$9,642,918	163,775.80	\$58.88	December 15, 2000	
Processors	Database Manager	Operating System	Other Software	Number of Users
1 iSeries 400 840-2420-001 (24-way) 17 iSeries 400 9406-270 2252	DB2 for AS/400 Version 4 Release 5	OS/400 Version 4 Release 5	BEA TUXEDO 6.4 INT LNG ENV COBOL OS/400 V4 R4 INT LNG ENV C OS/400 V4 R4	130,000

iSeries 400 Model 840-2420-001 Priced Configuration



System components:	Qty:	Description:
Server	1	
Processors	24	iSeries 400 Model 840-2420-001
Memory		128 GB main memory
Disk controllers	52	RAID Disk Unit Controller (4748)
Disk drives	1080	17.6 GB DASD Total: 13.5 TB
Total storage		
Clients (each):	17	
Processor	1	iSeries 400 Model 270-2252
Memory		8 GB main memory
Disk controller	2	RAID Disk Unit Controller (4748)
Disk drives	12	8.6 GB DASD Total: 51.6 GB



IBM e server iSeries 400 Model 840-2420-001

TPC-C REV 3.5
EXECUTIVE SUMMARY
Report Date: October 24, 2000

iSeries 400 Model 840-2420-001 Configuration

Item Description	Feature Number	Third Party Pricing	Unit Price	Quantity	Extended Price	Extended Maintenance	5-Year Price
Server Hardware:							
iSeries 400 Model 840 24-way Base System Unit	9406-840		640,000	1	640,000	84,816	724,816
RPQ 847108	847108		710,000	1	710,000		710,000
Processor - ISTAR 7S 450 Mhz 24-way, Cache 8x4 MB	2420-001		550,000	1	550,000	92,928	642,928
Interactive Card	1540		0	1	0		0
6m HSL Cable - Base I/O Tower	1461		550	26	14,300		14,300
8192 MB (RIVER - 256 MB technology)	3196		147,456	16	2,359,296		2,359,296
Programmable Regulator (req'd with 3196)	2730		750	2	1,500		1,500
PCI Ultra Magnetic Media Controller	2749		1,300	1	1,300		1,300
PCI IOP with 64 MB memory	2843		1,925	22	42,350		42,350
17.6 GB 10K RPM Disk Unit	4318		2,520	1080	2,721,600		2,721,600
CD-ROM	4425		415	1	415		415
PCI Two Line WAS IOA (ECS) req'd with 5540	4745		425	1	425		425
PCI Twinaxial IOA - Req'd with 5540	4746		750	1	750		750
PCI RAID Disk Unit Contorller with 26 MB write cache	4748		6,000	71	426,000		426,000
PCI 100/10 mbps Ethernet IOA	4838		900	20	18,000		18,000
PCI100/16/4 MBPS Token Ring IOA	2744		840	2	1,680		1,680
PCI Expansion Tower / Mantis	5074		17,900	23	411,700	381,984	793,684
PCI Expansion Tower	5101		9,000	24	216,000	476,928	692,928
25 GB 1/4-Inch Tape Drive	4486		6,000	1	6,000		6,000
V.24/EIA232 50ft PCI Cable - System Console	0348		125	1	125		125
Server Subtotal					8,122,141	1,036,656	9,158,097

Client Hardware:							
iSeries 400 Model 270 Base System Unit	9406-270		4,000	1	4,000	4,416	8,416
V.24/EIA 232 20ft PCI Cable for System Console	0348		125	1	125		125
6m HSL Cable - Base I/O Tower	1461		550	2	1,100		1,100
Processor Card	2252		16,000	1	16,000	7,824	23,824
PCI IOP with 32 MB memory	2842		1,800	3	5,400		5,400
Main Store - memory riser card - 16 slots	2884		2,200	1	2,200		2,200
512 MB DIMMS Main Storage	3025		2,048	16	32,768		32,768
8.6 GB 10K RPM Disk Unit	4317		1,400	12	16,800		16,800
CD-ROM	4525		415	1	415		415
4 GB 1/4-Inch Tape Drive	4582		1,300	1	1,300		1,300
PCI Expansion Tower	5075		6,000	1	6,000	5,856	11,856
PCI Two Line WAS IOA (ECS) req'd with 5540	4745		425	1	425		425
PCI Twinaxial IOA - Req'd with 5540	4746		750	1	750		750
PCI RAID Disk Unit Contorller with 26 MB write cache	4748		6,000	2	12,000		12,000
PCI 100/10 mbps Ethernet IOA	4838		900	2	1,800		1,800
Single Client Subtotal					101,083	18,096	119,179
Number of Clients				17			
Client Subtotal					1,718,411	307,632	2,026,043

Server Software:							
IBM Operating System/400 V4R5M0	Bundled			1	0	41,164	41,164
DB2 Query Manager Dev. Toolkit	QU1 and ST1		28,800	1	28,800		28,800
Client Software:							
IBM Operating System/400 V4R5M0	Bundled			17	0	329,654	329,654
BEA Tuxedo V6.4		1	3,000	17	51,000	40,800	91,800
ILE COBOL	5769CB1		2,400	1	2,400		2,400
Application Development Toolkit	5769PW1		3,020	1	3,020		3,020
DB2 Query Mgr and SQL Development kit	5769ST1		1,600	1	1,600		1,600
ILE C	5769CX2		2,400	1	2,400		2,400
Software Subtotal					89,220	411,618	500,838

User Connectivity:							
12-port 10/100 Ethernet Switch		2	975	21	20,480		20,480
8-Port 10Mb Hub (10% spares)		2	29	23976	684,515		684,515
User Connectivity Subtotal					704,995	0	704,995
5-year System Subtotal					10,634,067	1,755,906	12,389,973

Discounts:	%Allowance	Volume	Discount
Revenue Allowance	22	9,878,072	(2,173,176)
5-year Term Maintenance Contract Discount	8	1,344,288	(107,543)
5-year Maintenance Prepay Discount	15.05	1,236,745	(186,130)
Software Support Discount For Secondary Systems	85	329,654	(280,206)
		Purchase	Maintenance
5-year System Total		8,460,891	1,182,027
tpmC			163775.80
\$/tpmC			58.88

Note: All pricing is from IBM except items noted in the 3rd Party Pricing column. 1 - BEA Systems, Inc.; 2 - Venture Computer Systems.

Notes:
 Server Hardware requires no charge RPQ 847109
 Revenue Allowance is applied to hardware and software for the priced configuration.
 5-Year Term Maintenance Contract Discount is given when 5-year contract is signed.
 5-Year Maintenance Prepay Discount is given when 5-year maintenance costs are prepaid.
 Software Support Discount For Secondary Systems is given for maintenance costs on Multiple systems in a single I/S shop.
 Results audited by François Raab of InfoSizing Inc.

Five-Year Cost of Ownership: \$9,642,918
tpmC Rating: 163,775.80
\$/tpmC: \$58.88

Prices used in TPC benchmarks reflect the 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.

Numerical Quantities Summary for IBM ^

iSeries 400 Model 840-2420-001

MQTH, computed Maximum Qualified Throughput 163,775.80
 % throughput difference, reported & repeated 0.99%

Response Times (in seconds)	<u>90%</u>	<u>Avg.</u>	<u>Max.</u>
- New Order	0.5	0.32	5.01
- Payment	0.3	0.20	5.21
- Order-Status	0.5	0.31	4.43
- Delivery (interactive portion)	0.2	0.11	0.21
- Delivery (deferred portion)	2.1	1.70	6.18
- Stock-Level	1.7	0.82	9.22
- Menu	0.1	0.10	0.32
- Response time delayed for emulated components	0.1		

Transaction Mix (in percent of total transactions)	
- New Order	44.88%
- Payment	43.05%
- Order-Status	4.03%
- Delivery	4.03%
- Stock-Level	4.02%

Keying/Think Times (in seconds)	<u>Min.</u>	<u>Avg.</u>	<u>Max.</u>
- New Order	18.00/0.00	18.00/12.02	18.14/120.24
- Payment	3.00/0.00	3.00/12.01	3.12/120.23
- Order-Status	2.00/0.00	2.00/10.01	2.16/100.22
- Delivery	2.00/0.00	2.00/5.04	2.07/50.21
- Stock-Level	2.00/0.00	2.00/5.02	2.06/50.21

Test Duration	
- Ramp-up time	85 minutes
- Measurement interval	20 minutes
- Number of checkpoints	N/A ¹
- Checkpoint interval	N/A ¹
- Number of transactions (all types) completed in Measurement Interval	7,298,931

1. Transparent file synchronization occurred at least five times during the measurement interval.