



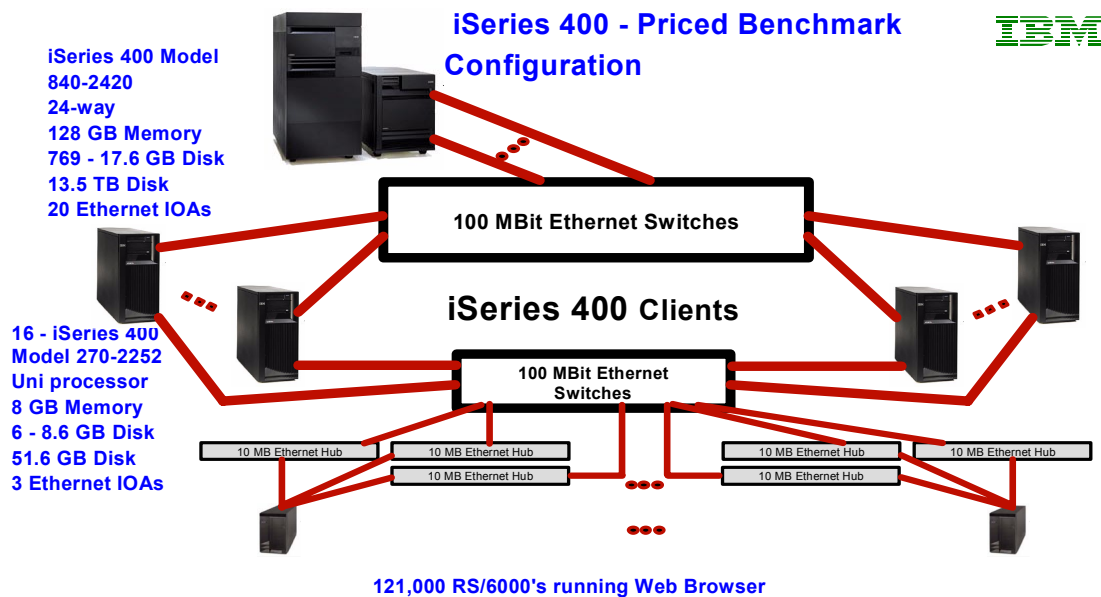
IBM® server iSeries 400 Model 840-2420

TPC-C Rev. 5.0

Report Date:
March 19, 2001

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
\$6,782,752	152,346.25	\$44.52	September 15, 2000	
Processors	Database Manager	Operating System	Other Software	Number of Users
1 iSeries 400 840-2420 (24-way) 16 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	121,000

iSeries 400 Model 840-2420 Priced Configuration



System components:	Qty:	Description:
Server	1	
Processors	24	iSeries 400 Model 840-2420
Memory		128 GB main memory
Disk controllers	52	RAID Disk Unit Controller (4748)
Disk drives	769	17.6 GB DASD Total: 13.5 TB
Total storage		
Clients (each):	16	
Processor	1	iSeries 400 Model 270-2252
Memory		8 GB main memory
Disk controller	2	RAID Disk Unit Controller (4748)
Disk drives	6	8.6 GB DASD Total: 51.6 GB



**IBM eServer iSeries 400
Model 840-2420**

TPC-C REV. 5.0
EXECUTIVE SUMMARY

Report Date: March 19, 2001

IBM iSeries 400 840-2420 Configuration

<u>Item Description</u>	<u>Feature Number</u>	<u>Third Party Pricing</u>	<u>Unit Price</u>	<u>Quantity</u>	<u>Extended Price</u>	<u>Extended Maintenance</u>	<u>3-Year Price</u>
Server Hardware:							
IBM iSeries 400 Model 840 24-way Base System Unit	9406-840		640,000	1	640,000	42,408	682,408
Processor - ISTAR 7S 500 Mhz 24-way, Cache 8x4 MB	2420		550,000	1	550,000	46,464	596,464
Interactive Card	1540		0	1	0		0
6m HSL Cable - Base I/O Tower	1461		550	20	11,000		11,000
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	769	1,937,880		1,937,880
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 Contorlier with 26 MB wirte cache	4748		6,000	52	312,000		312,000
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	17	304,300	141,168	445,468
PCI Expansion Tower	5101		9,000	18	162,000	178,848	340,848
25 GB 1/4-Inch Tape Drive	4486		5,000	1	5,000		5,000
V.24/EIA232 50ft PCI Cable - System Console	0367		125	1	125		125
Server Subtotal					6,348,021	408,888	6,756,909

Client Hardware:							
IBM iSeries 400 Model 270 Base System Unit	9406-270		4,000	1	4,000	2,208	6,208
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	3,912	19,912
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	6	8,400		8,400
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	2,928	8,928
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 Contorlier with 26 MB wirte cache	4748		6,000	2	12,000		12,000
PCI 100/10 mbps Ethernet IOA	4838		900	3	2,700		2,700
Single Client Subtotal					93,583	9,048	102,631
Number of Clients				16			
Client Subtotal					1,497,328	144,768	1,642,096

Server Software:							
IBM Operating System/400 V4R5M0	Bundled			1	0	33,343	33,343
DB2 Query Manager Dev. Toolkit	QU1 and ST1		28,800	1	28,800		28,800
Client Software:							
IBM Operating System/400 V4R5M0	Bundled		0	16	0	251,313	251,313
BEA Tuxedo V6.4		1	3,000	16	48,000	33,120	81,120
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					86,220	317,776	403,996
3-year System Subtotal					7,931,569	871,432	8,803,001

	<u>%Allowance</u>	<u>Volume</u>	<u>Discount</u>	
Revenue Allowance	22	7,883,569	(1,734,385)	
3-year Term Maintenance Contract Discount	3	553,656	(16,610)	
3-year Maintenance Prepay Discount	10.36	537,046	(55,638)	
Software Support Discount For Secondary Systems	85	251,313	(213,616)	
3-year System Total				
tpmC		<u>Purchase</u>	<u>Maintenance</u>	<u>Total</u>
\$/tpmC		6,197,184	585,568	6,782,752
				152346.25
Note: All pricing is from IBM except items noted in the 3rd Party Pricing column. 1 - BEA Systems, Inc.;				
				44.52

Notes:
 Server Hardware requires no charge RPQ 847109
 Revenue Allowance is applied to hardware and software for the priced configuration.
 3-Year Term Maintenance Contract Discount is given when 3-year contract is signed.
 3-Year Maintenance Prepay Discount is given when 3-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.

Three Year Cost of Ownership: \$6,782,752
tpmC Rating: 152,346.25
\$/tpmC: \$44.52

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 pricing 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 @server iSeries 400 Model 840-2420

MQTH, computed Maximum Qualified Throughput 152,346.25
 % 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	9.97
- Payment	0.3	0.20	4.99
- Order-Status	0.5	0.30	2.76
- Delivery (interactive portion)	0.2	0.11	0.19
- Delivery (deferred portion)	2.1	1.70	6.18
- Stock-Level	1.8	0.82	6.00
- Menu	0.1	0.10	0.37

- Response time delayed for emulated components 0.1

Transaction Mix (in percent of total transactions)	
- New Order	44.85%
- Payment	43.06%
- 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	18.00/12.01	18.23/120.23
- Payment	3.00/0.00	3.00/12.03	3.17/120.23
- Order-Status	2.00/0.00	2.00/10.01	2.10/100.20
- Delivery	2.00/0.00	2.00/5.05	2.07/50.22
- Stock-Level	2.00/0.00	2.00/5.03	2.21/50.21

Test Duration	
- Ramp-up time	75 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	6,792,938

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

For additional information on the IBM @server iSeries 400 see: <http://www.ibm.com/eserver/iseries>