



**IBM @server xSeries 430  
with IBM Netfinity 4500R  
Using IBM DB2 UDB 7.2**

TPC-W Version 1.5

Report Date:  
**05/01/2001**

**Price Performance**  
\$136.80 per WIPS@100,000

**Performance**  
7554.7 WIPS@100,000

**Available**  
**June 8, 2001**

**Total Cost**  
\$1,033,475.00

**WIPSo@100,000**  
2777.3

**WIPSB@100,000**  
6108.6

**Scale**  
100,000 items

**Number of Users**  
55,000

**Number of Systems**  
21

**Web Server**  
Microsoft Corporation  
Internet Information Server 5.0

**Application Server**  
Microsoft ISAPI

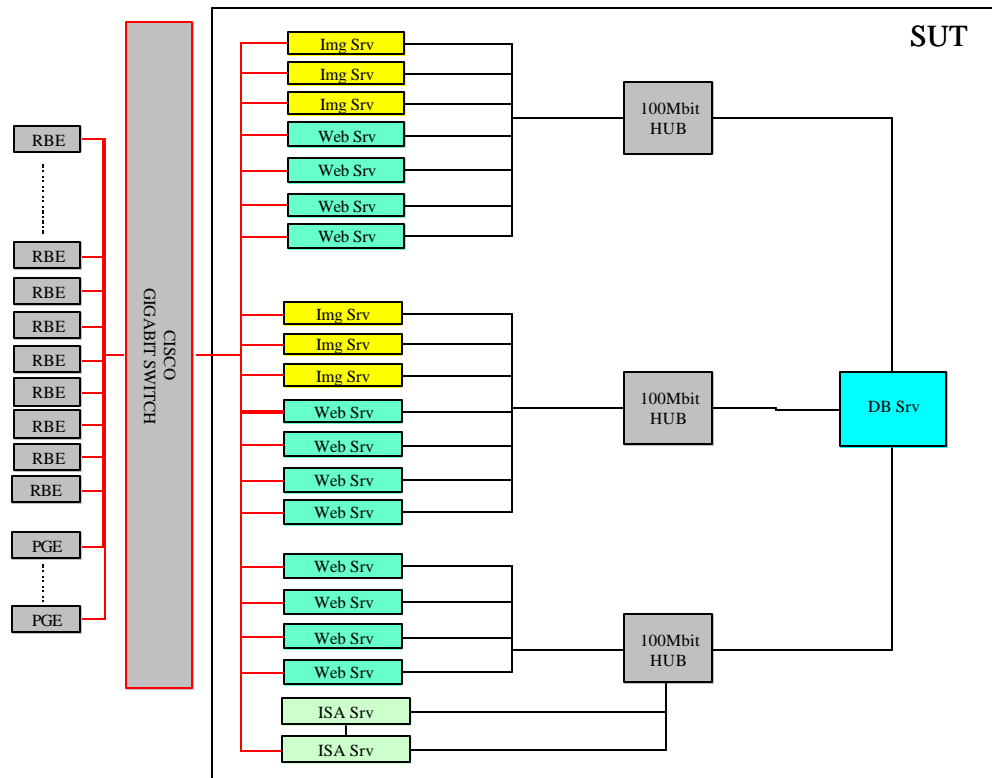
**Image Server**  
Microsoft Corporation  
Internet Information Server 5.0

**Database Manager**  
IBM DB2 UDB Version 7.2

**Load Balancer**  
Microsoft DNS

**Web Cache**  
Microsoft ISA on Windows 2000 Server

**Other Software:** Microsoft Windows 2000 Indexing Services



Function	System	# of Systems	Operating System	Processors	Memory
Web Server	Netfinity 4500R	12	Microsoft Windows 2000 Server	2 Pentium III 933MHz / 256K	512 MB
Application Server					
Image Server	Netfinity 4500R	6	Microsoft Windows 2000 Server	2 Pentium III 933MHz / 256K	2304 MB
Database Server	xSeries 430	1	ptx 4.6.1	12 Pentium III Xeon 900MHz / 2MB	9 GB
Load Balancer	Netfinity 4500R	2	Microsoft Windows 2000 Server	1 Pentium III 933MHz / 256K	1152 MB
Web Cache					
Other Software					



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Description	Part No	Third Party Brand	Price	Unit Price	QTY	Price	3Y Maint Price
<b>Web/Application/Index/Image Servers</b>							
Netfinity 4500R with 933MHz Pentium III 256KB Cache	86565RY	IBM	2	\$2,290.00	20	\$45,800.00	
Netfinity 933 MHz 133 FSB/256KB Pentium III Processor	19K4631	IBM	2	\$889.00	18	\$16,002.00	
128MB 133 MHz ECC SDRAM RDIMM II	33L3123	IBM	2	\$166.00	18	\$2,988.00	
256MB 133 MHz ECC SDRAM RDIMM II	33L3125	IBM	2	\$325.00	12	\$3,900.00	
1GB 133 MHz ECC SDRAM RDIMM II	33L3129	IBM	2	\$2,306.00	14	\$32,284.00	
10/100 Ethernet Server Adapter	06P3601	IBM	2	\$89.00	2	\$178.00	
18.2GB 10K-4 Ultra160 SCSI Hot-Swap SL HDD	37L7205	IBM	2	\$415.00	32	\$13,280.00	
3YR Onsite repair 24x7 4-Hour warrantv service upgrade	30L9186	IBM	1	\$1,495.00	20		\$29,900.00
Intel Pro/1000 Gigabit Server Adapter (10% Spare)	PWLA8490	Intel	2	\$584.00	22	\$12,848.00	
Netfinity Rack	9306900	IBM	2	\$1,548.00	3	\$4,644.00	
Side Panel Kit	94G6669	IBM	2	\$175.00	2	\$350.00	
E51 - 15(13.8) in. UV-NH Color Monitor	633347N	IBM	2	\$154.00	20	\$3,080.00	
NETGEAR FS108 8-Port Fast Ethernet Switch (10% spaer)	FS108NA	Bay	2	\$78.00	5	\$390.00	
<b>Web/App/Image/ISA Subtotal</b>						<b>\$135,744.00</b>	<b>\$29,900.00</b>
<b>Database</b>							
NUMA BASE Console, ethernet	CON-0500	IBM	1	\$4,290.00	1	\$4,290.00	
Console country kit for NAO, includes power cord and modem	PCD-8001-OU	IBM	1		1		
x430 Base Quad with 1GB	BASE-0424	IBM	1	\$20,475.00	3	\$61,425.00	
Pentium III Xeon 900MHz, 2M cache-single proc	PROC-0900-02	IBM	1	\$6,216.00	12	\$74,592.00	
IQ-LINK for E4x0 quad	IQ-LINK-20	IBM	1	\$14,300.00	3	\$42,900.00	
32X CD-ROM and QIC525 TAPE DRIVE in a 3.5" PBAY	CDR-0010-03	IBM	1	\$600.00	1	\$600.00	
36 GB Disk in 3.5" PBAY Carrier	DSK-3600-B2	IBM	1	\$761.00	1	\$761.00	
Boot Bay , SE SCSI HA and cable, devices separate	BBAY-MR00-01	IBM	1	\$1,430.00	1	\$1,430.00	
1GB Memory Add-on for 400 Series Quad	MEM-1200-00	IBM	1	\$11,050.00	6	\$66,300.00	
FC Switch: 8 Ports, with 8 multi-mode NON-OFC GBIC's	FCS-0008-01	IBM	1	\$18,330.00	1	\$18,330.00	
PCI/Fibre Channel Ctrl w/multi-mode NON-OFC GLM. 500M	IOC-0210-54	IBM	1	\$2,612.00	3	\$7,836.00	
8 meter, multi-mode, FC cable for all MM FC connections	CBL-0800-F3	IBM	1	\$101.00	3	\$303.00	
IQ-RING Memory Programmable Control Switch	IQ-RING-00	IBM	1	\$26,000.00	1	\$26,000.00	
IQ Ring-IQ Link interconnect cable, quads 1, 2, or 3	CBL-PLUS-03	IBM	1	\$1,281.00	3	\$3,843.00	
IBM Enterprise Server Cabinet	CAB-2000-00	IBM	1	\$6,500.00	1	\$6,500.00	
3YR Onsite repair 24x7 4-Hour warranty Service		IBM	1				\$150,106.00
<b>Database Server Subtotal</b>						<b>\$315,110.00</b>	<b>\$150,106.00</b>
<b>Database Storage</b>							
FASiT200, HiAv, Initial Enclosure, 10 Slots, No Drives	3542-2RU	IBM	2	\$14,840.00	2	\$29,680.00	\$1,520.00
FASiT200 Initial Enclosure Accessories	3542NQ-ACC	IBM	1	\$468.00	2	\$936.00	
FASiT200, HiAv, Expansion Enclosure, 10 Slots, No Drives	3560-1RU	IBM	2	\$3,540.00	4	\$14,160.00	\$600.00
FASiT200 Expansion Enclosure Accessories	3560NQ-ACC	IBM	1	\$1,098.00	4	\$4,392.00	
18.2GB 10KRPM HDD, FASiT200 (10% spare)	19K0652	IBM	2	\$528.00	66	\$34,848.00	
<b>Database Storage Subtotal</b>						<b>\$84,016.00</b>	<b>\$2,120.00</b>
<b>Software</b>							
ptx Initial 2 users license	PTX-BASE-000	IBM	1		1		\$49,571.00
ptx/SVM v2.3.1	SVM-P061-2A	IBM	1	\$4,875.00	3	\$14,625.00	
ptx v4.6.1 CD-ROM Media - US	PTX-C461-000	IBM	1	\$1,300.00	1	\$1,300.00	
ptx/C++ v5.2.5 for ptx v4.6.1	CMP-5250-00	IBM	1	\$7,150.00	1	\$7,150.00	
DB2 Enterprise Edition for ptx V7.2 Program Package	11K8374	IBM	1	\$15,870.00	11	\$15,870.00	
DB2 Enterprise Edition for ptx 1 Process Entitlement	11K8106	IBM	1	\$15,770.00	1	\$173,470.00	\$24,681.00
Microsoft Windows 2000 Server	C11-00018	MS	3	\$999.00	20	\$19,980.00	
Visual C++ Professional 6.0 Win32	PCI502-P64	MS	3	\$549.00	1	\$549.00	
Microsoft ISA Standard Edition	E84-00001	MS	3	\$1,499.00	2	\$2,998.00	
3-Year maintenance for all Microsoft Software		MS	3	\$2,095.00	3		\$6,285.00
<b>Software Subtotal</b>						<b>\$235,942.00</b>	<b>\$80,537.00</b>
<b>3-Year Cost of Ownership</b>						<b>\$1,033,475.00</b>	
<b>WIPS@100,000</b>						<b>7,554.7</b>	
<b>\$/ WIPS @ 100,000</b>						<b>\$136.80</b>	

1=IBM 2=Software House International 3=Microsoft

**Result Audited By Francois Raab of InfoSizing ( [www.sizing.com](http://www.sizing.com) )**



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**Numerical Quantities Summary**

**WIPS Interactions Summary**

Interaction	Mix	Count	90% Response
Home	15.99%	2174580	0.1
Shopping Cart	11.59%	1576619	0.3
Customer Registration	3.00%	408168	0.1
Buy Request	2.60%	353622	0.6
Buy Confirm	1.20%	162555	2.5
Order Inquiry	0.75%	102277	0.3
Order Display	0.66%	89937	0.3
Search Request	20.01%	2720566	0.1
Search Result	17.00%	2311975	0.1
New Products	5.00%	679876	0.1
Best Sellers	5.00%	679524	0.1
Product Detail	17.01%	2313319	0.1
Admin. Request	0.10%	13444	0.1
Admin. Confirm	0.09%	12142	0.7

**Measurement Intervals Summary**

	Shopping	Browsing	Ordering
Ramp-up Time (min.)	71.2	56.0	44.4
Length of Measurement Interval (min.):	30.0	30.0	30.0
Average Think Time (sec.)	7.2	7.2	7.8
Average User Session duration (min.):	14.9	15.3	14.9
Number of Users	55,000	45,000	25,000

**Overload Run**

Maximum Think Time	90% WIRT for Home	Failure Rate	WIPS
19.5 (average = 1.9)	2.2	0.002%	8809.9