IBM 4300 Series
Product Enhancement

As part of efforts to strengthen its mid-range computer line-up, IBM extended the growth path of its 4381 small mainframe line in May with the addition of four new top-end processors in addition to a new entry-level 3090-120E. (Refer to the *Product Enhancement* at the end of the IBM 3090 Series report for more details about the Model 120E.) In a related move, IBM also extended graduated charges to MVS/XA, while also announcing a program to help VSE users migrate applications to MVS. The combined 4381/3090 announcements were thought to be part of ongoing efforts to stem further user defections to the Digital Equipment Corporation camp.

The four additional 4381 model groups extend the power range of the existing 4381 and now overlap the performance of the larger 3090 models. New 4381 machines include the Model Groups 21, 22, and 23, all single processors, and the Model Group 24, a dual processor. The high-end Model Group 24 is approximately 30 percent more powerful than the Model Group 14; the Model Group 23 single processor is approximately 30 percent more powerful than the Model Group 13; and the Model Group 21 is approximately 30 percent more powerful than the Model Group 11. Overall, memory ranges from a minimum of eight megabytes for the Model Group 21 to up to 64 megabytes for the Model Groups 23 and 24. The Models 22, 23, and 24 all use IBM's faster and denser one-megabit chip technology. The one-megabit chips can access stored data in 80 nanoseconds. In the cache memory area, the uniprocessors use a single high-speed buffer and the dual processor uses two high-speed buffers, one for each instruction processor. The Model Group 21 has a buffer capacity of eight kilobytes, the Model Group 22 has 32 kilobytes, the Model Group 23 has 64 kilobytes, and the dual Model Group 24 has a twin cache buffer totaling 128 kilobytes.

As for input/output capacity, the uniprocessor models feature six standard and six optional channels. The Model Group 24 dual processor features 12 standard channels and 12 optional channels. Users can also attach OEM devices to the new 4300 models using the Serial Original Equipment Manufacturer's Interface (SOEMI). Additionally, IBM has added more data streaming channels. Both the Models 21 and 22 feature six data steaming channels, the Model Group 23 has 10 and the Model Group 24 has 20.

The new models are air-cooled and can be installed with or without a raised floor. This means the machines can be installed in a traditional data processing environment or can be placed in end-user areas, according to IBM.

Users who installed earlier 4381 models can upgrade to the new machines. Specifically, users of Model Groups 11 through 14 and Model Groups 1 through 3 can convert to the new models. Upgrades from Model Groups 1 through 3 to Model Groups 11 through 14 are still available. With the addition of four new 4381s, users can take advantage of a six-fold performance growth path from the Model Group 11 to the top-end Model Group 24. Users who install a Model Group 21 can improve performance by 50 percent by upgrading to a Model Group 22, according to IBM. An upgrade from a Model Group 22 to Model Group 23 represents a 60 percent improvement, and an upgrade from a Model Group 23 to a Model Group 24 represents an 80 percent improvement.

The new 4381 models will be available by first quarter 1988, and all upgrades between the new models will be available by second quarter 1988. As an incentive to order the new models earlier than the announced delivery dates, IBM is offering a special 4381 installation option that can save potential customers from $20,000 to $75,000, according to IBM. For customers who order the new models between May 19 and November 30, IBM will deliver the ordered model in two stages. Users will first take delivery on an "interim" 4381 Model Group 11, 12, 13, or 14 before December 31. The installed system will then be converted to one of the newly announced models when they become available next year. List purchase prices range from $225,000 for a low-end Model Group 21 to $1,130,000 for a top-end Model Group 24 system.

In addition to the new hardware, IBM announced a new VSE migration aid and a new software pricing structure. To encourage 4381 users to convert from the VSE operating system to MVS/XA, IBM announced the MVS Migration System (MVS-MS). Announced with MVS-MS was the VSE/MVS Migration Assistant SolutionPac which includes project initiation services and optional switchover assistance.

MVS-MS is intended to reduce the time and cost required to convert from VSE/SP Versions 1, 2, and 3 to an MVS operating environment. Conversion functions include loading and validating VSE source code and JCL; translation, compilation, and link edit; MVS JCL generation and job preparation; and switchover of files and data bases. After MVS applications are converted and tested, MVS-MS lets users switchover in a single

process. This eliminates the need to set up dual production systems and sets a clear deadline for project completion, according to IBM. The company estimates a conversion team of five to seven people can carry out the conversion process quickly and with minimal disruption to current production and development operations.

In addition to hardware, IBM extended its graduated one-time charge pricing scheme to selected MVS/XA and Cross System products. Software charges are now based on the size of the central processor and its designated processor group, resulting in a decrease in charges for some selected IBM programs depending on pricing category. There are now four price group categories ranging from Group 10 at the low end to Group 40 which covers all IBM 3090 mainframes, except for the new Model 120E. The Model 120E and 4381 Model Groups 2, 3, 12, 13, 14, 22, 23, and 24 fall within Group 30. The 9370 Models 60 and 90, the 4381, Model Groups 1, 11, and 21, and 4361 Model Groups 4 and 5 fall within the Group 20. The 9370 Model 20 and 40, and the 4361 Model Group 3 fall within Group 10. IBM also extended graduated one-time charge options to selected license programs which previously had no one-time charge. As part of these announcements, IBM announced new graduated group-to-group one-time charges and new version-to-version upgrade charges, which did not exist previously. Version-to-version upgrade charges are available only until December 31, 1988. QMF Version 1 to Version 2 and SQL/DS Version 1 to Version 2 are excluded.

EQUIPMENT PRICES

		Purch. Price ($)	Monthly Maint. ($)	Monthly Rental ($)
PROCESSORS				
4381 Model Group 21				
4381 M21	Processor with eight megabytes of main memory and eight-kilobyte buffer	225,000	450.00	26,785
4381 P21	Same as M21, but with 16 megabytes of main memory	265,000	462.00	32,485
Model Group 22				
4381 P22	Processor with 16 megabytes of main memory and 32-kilobyte buffer	350,000	550.00	41,665
4381 R22	Same as P22, but with 32 megabytes of main memory	430,000	574.00	53,065
Model Group 23				
4381 P23	Processor with 16 megabytes of main memory and 64-kilobyte buffer	530,000	640.00	63,095
4381 R23	Same as P23, but with 32 megabytes of main memory	610,000	644.00	74,495
4381 S23	Same as P23, but with 48 megabytes of main memory	690,000	688.00	85,895
4381 T23	Same as P23, but with 64 megabytes of main memory	770,000	712.00	97,295
Model Group 24				
4381 P24	Processor with 16 megabytes of main memory and a 128-kilobyte buffer	890,000	810.00	105,950
4381 R24	Same as P24, but with 32 megabytes of main memory	970,000	834.00	117,350
4381 S24	Same as P24, but with 48 megabytes of main memory	1,050,000	858.00	128,750
4381 T24	Same as P24, but with 64 megabytes of main memory	1,130,000	882.00	140,150
	Additional 4381 features and options:			
1850	Channel-to-Channel Adapter	23,150	31.00	1,650
1870	Additional Block Multiplexers Channels for single-processor models	35,580	12.50	2,535
1871	Additional Block Multiplexers Channels for dual-processor models	35,580	12.50	2,535
1872	Second Additional Block Multiplexer Channels for Model Group 24 only	35,580	12.50	2,535
System Upgrades:				
Model Group 11:				
	4381 L11 to 4381 M21	60,000		
	4381 L11 to 4381 P21	100,000		
	4381 M11 to 4381 P21	80,000		
	4381 P11 to 4381 P21	40,000		
	4381 L11 to 4381 P22	175,000		
	4381 L11 to 4381 R22	255,000		
	4381 M11 to 4381 P22	155,000		
	4381 M11 to 4381 R22	235,000		
	4381 P11 to 4381 P22	115,000		
	4381 P11 to 4381 R22	195,000		

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Model Group 12	
4381 M12 to 4381 P23	230,000
4381 M12 to 4381 R23	310,000
4381 M12 to 4381 S23	390,000
4381 M12 to 4381 T23	470,000
4381 P12 to 4381 P23	190,000
4381 P12 to 4381 R23	270,000
4381 P12 to 4381 S23	350,000
4381 P12 to 4381 T23	430,000
4381 Q12 to 4381 R23	230,000
4381 Q12 to 4381 S23	310,000
4381 Q12 to 4381 T23	390,000
4381 R12 to 4381 R23	190,000
4381 R12 to 4381 S23	270,000
4381 R12 to 4381 T23	350,000
Model Group 13	
4381 M13 to 4381 P23	180,000
4381 M13 to 4381 R23	260,000
4381 M13 to 4381 S23	340,000
4381 M13 to 4381 T23	420,000
4381 P13 to 4381 P23	140,000
4381 P13 to 4381 R23	220,000
4381 P13 to 4381 S23	300,000
4381 P13 to 4381 T23	380,000
4381 Q13 to 4381 R23	180,000
4381 Q13 to 4381 S23	260,000
4381 Q13 to 4381 T23	340,000
4381 R13 to 4381 R23	140,000
4381 R13 to 4381 S23	220,000
4381 R13 to 4381 T23	300,000
4381 M13 to 4381 P24 with Feature 1870	449,420
4381 M13 to 4381 R24 with Feature 1870	529,420
4381 M13 to 4381 S24 with Feature 1870	609,420
4381 M13 to 4381 T24 with Feature 1870	689,420
4381 P13 to 4381 P24 with Feature 1870	409,420
4381 P13 to 4381 R24 with Feature 1870	489,420
4381 P13 to 4381 S24 with Feature 1870	569,420
4381 P13 to 4381 T24 with Feature 1870	649,420
4381 Q13 to 4381 R24 with Feature 1870	449,420
4381 Q13 to 4381 S24 with Feature 1870	529,420
4381 Q13 to 4381 T24 with Feature 1870	609,420
4381 R13 to 4381 R24 with Feature 1870	409,420
4381 R13 to 4381 S24 with Feature 1870	489,420
4381 R13 to 4381 T24 with Feature 1870	569,420
4381 M13 to 4381 P24 without Feature 1870	485,000
4381 M13 to 4381 R24 without Feature 1870	565,000
4381 M13 to 4381 S24 without Feature 1870	645,000
4381 M13 to 4381 T24 without Feature 1870	725,000
4381 P13 to 4381 P24 without Feature 1870	445,000
4381 P13 to 4381 T24 without Feature 1870	685,000
4381 Q13 to 4381 R24 without Feature 1870	485,000
4381 Q13 to 4381 S24 without Feature 1870	565,000
4381 Q13 to 4381 T24 without Feature 1870	645,000
4381 R13 to 4381 R24 without Feature 1870	445,000
4381 R13 to 4381 S24 without Feature 1870	525,000
4381 R13 to 4381 T24 without Feature 1870	605,000
Model Group 14	
4381 P14 to 4381 P24	260,000
4381 P14 to 4381 R24	340,000
4381 P14 to 4381 S24	420,000
4381 P14 to 4381 T24	500,000
4381 Q14 to 4381 R24	300,000
4381 Q14 to 4381 S24	380,000
4381 Q14 to 4381 T24	460,000
4381 R14 to 4381 R24	260,000
4381 R14 to 4381 S24	340,000
4381 R14 to 4381 T24	420,000
Model Group 21	
4381 M21 to 4381 P21	40,000
4381 M21 to 4381 P22	125,000
4381 M21 to 4381 R22	205,000
4381 P21 to 4381 P22	85,000
4381 P21 to 4381 R22	165,000

IBM 4300 Series
Product Enhancement

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Model Group 22	
4381 P22 to 4381 R22	80,000
4381 P22 to 4381 P23	180,000
4381 P22 to 4381 R23	260,000
4381 P22 to 4381 S23	340,000
4381 P22 to 4381 T23	420,000
4381 R22 to 4381 R23	180,000
4381 R22 to 4381 S23	260,000
4381 R22 to 4381 T23	340,000
Model Group 23	
4381 P23 to 4381 R23	80,000
4381 P23 to 4381 S23	160,000
4381 P23 to 4381 T23	240,000
4381 R23 to 4381 S23	80,000
4381 R23 to 4381 T23	160,000
4381 S23 to 4381 T23	80,000
4381 P23 to 4381 P24 with Feature 1870	324,420
4381 P23 to 4381 R24 with Feature 1870	404,420
4381 P23 to 4381 S24 with Feature 1870	484,420
4381 P23 to 4381 T24 with Feature 1870	564,420
4381 R23 to 4381 R24 with Feature 1870	324,420
4381 R23 to 4381 S24 with Feature 1870	404,420
4381 R23 to 4381 T24 with Feature 1870	484,420
4381 S23 to 4381 S24 with Feature 1870	324,420
4381 S23 to 4381 T24 with Feature 1870	404,420
4381 T23 to 4381 T24 with Feature 1870	324,420
4381 P23 to 4381 P24 without Feature 1870	360,000
4381 P23 to 4381 R24 without Feature 1870	440,000
4381 P23 to 4381 S24 without Feature 1870	520,000
4381 P23 to 4381 T24 without Feature 1870	600,000
4381 R23 to 4381 R24 without Feature 1870	360,000
4381 R23 to 4381 S24 without Feature 1870	440,000
4381 R23 to 4381 T24 without Feature 1870	520,000
4381 S23 to 4381 S24 without Feature 1870	360,000
4381 S23 to 4381 T24 without Feature 1870	440,000
4381 T23 to 4381 T24 without Feature 1870	360,000
4381 P24 to 4381 R24	80,000
4381 P24 to 4381 S24	160,000
4381 P24 to 4381 T24	240,000
4381 R24 to 4381 S24	80,000
4381 R24 to 4381 T24	160,000
4381 S24 to 4381 T24	80,000 □