



IBM IntelliStation[®] POWER
and IBM RS/6000[®]
Graphics Performance Report

May 14, 2002

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GRAPHICS PERFORMANCE of IBM UNIX[®] WORKSTATIONS

May 14, 2002

This issue of the Graphics Performance Report includes performance results for IBM workstations including IntelliStation POWER 265 and RS/6000 Models 150, 170 and 270 using AIX[®] 5L[™].

All benchmarks were run on both AIX 4.3.3.75 and AIX 5L Version 5.1.0 Modification Level 17.

Section 1 - RS/6000® 43P-150 at 375 MHz with 1MB of L2 Cache

	AIX 4.3.3.75		AIX 5.1.0.17			
	GXT130P	GXT4500P	GXT130P	GXT135P	GXT4000P	GXT4500P
SPECxpc						
Xmark93	13.33	57.08	14.56	21.90	51.73	54.42
SPECplb						
PLBwire93	nr	248.8	nr	nr	246.6	246.0
PLBsurf93	nr	502.2	nr	nr	483.8	487.3
SPECviewperf 6.1.2						
AWadvS-04	nr	14.980	nr	nr	14.900	14.890
DRV-07	nr	2.027	nr	nr	1.957	1.925
DX-06	nr	3.700	nr	nr	3.668	3.610
Light-04	nr	1.154	nr	nr	1.150	1.152
MedMCAD-01	nr	4.319	nr	nr	4.341	4.337
ProSDRS-03	nr	6.394	nr	nr	6.362	6.437
CATIA and Pro/ENGINEER						
Graper423	nr	4.898	nr	nr	4.636	4.829
CATIA423_CPU	nr	3.358	nr	nr	3.348	3.353
CATIA423_Cover (sec)*	nr	0.2569	nr	nr	0.2801	0.2681
CATIA423_ENGINE (sec)*	nr	0.1406	nr	nr	0.1456	0.1448
CATIAV5R6_SAG_CYL	nr	nr	nr	nr	nr	nr
CATIAV5R6_HOLLAND (sec)*	nr	263.8	nr	nr	270.6	269.5
PROE2000I2_2000370	nr	nr	nr	nr	nr	nr

Section 2a - RS/6000 44P-170 - AIX 4.3.3.75

RS/6000 44P-170 333 MHz with 1MB of L2 Cache

	GXT130P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc					
Xmark93	9.25	70.07	76.91	69.80	72.72
SPECplb					
PLBwire93	nr	571.6	577.6	934.1	964.7
PLBsurf93	nr	872.4	921.3	1263.0	1406.0
SPECviewperf 6.1.2					
AWadvS-04	nr	23.870	23.930	58.310	60.970
DRV-07	nr	3.029	3.002	12.920	13.430
DX-06	nr	6.945	6.809	14.580	14.570
Light-04	nr	1.741	1.739	3.176	3.193
MedMCAD-01	nr	6.471	6.534	22.350	22.370
ProSDRS-03	nr	14.630	14.710	31.230	33.100
CATIA and Pro/ENGINEER					
Graper423	nr	8.454	8.643	10.91	11.65
CATIA423_CPU	nr	5.711	5.834	5.706	5.659
CATIA423_Cover (sec)*	nr	0.1172	0.1181	0.0701	0.0715

	GXT130P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
CATIA423_ENGINE (sec)*	nr	0.0730	0.0728	0.0570	0.0572
CATIAV5R6_SAG_CYL	nr	11.92	12.12	15.45	15.61
CATIAV5R6_HOLLAND (sec)*	nr	152.60	152.80	114.30	112.60
PROE2000I2_2000370	nr	0.68	0.68	1.51	1.50

RS/6000 44P-170 at 400 MHz with 4MB of L2 Cache

	GXT130P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc					
Xmark93	9.78	78.97	85.70	79.07	87.04
SPECplb					
PLBwire93	nr	722.8	720.1	1118.0	1181.0
PLBsurf93	nr	1054.0	1138.0	1483.0	1671.0
SPECviewperf 6.1.2					
AWadv-04	nr	28.960	29.270	67.080	72.210
DRV-07	nr	3.758	3.746	14.960	14.990
DX-06	nr	8.384	8.424	17.030	16.960
Light-04	nr	2.117	2.116	3.789	3.782
MedMCAD-01	nr	7.865	8.096	25.490	26.440
ProSDRS-03	nr	17.650	17.690	32.900	35.740
CATIA and Pro/ENGINEER					
Graper423	nr	9.724	10.52	12.55	13.65
CATIA423_CPU	nr	7.865	7.972	7.832	7.863
CATIA423_Cover (sec)*	nr	0.0991	0.1001	0.0600	0.0603
CATIA423_ENGINE (sec)*	nr	0.0641	0.0593	0.0528	0.0488
CATIAV5R6_SAG_CYL	nr	14.22	14.73	18.01	19.12
CATIAV5R6_HOLLAND (sec)*	nr	120.40	119.20	92.86	89.94
PROE2000I2_2000370	nr	0.88	0.87	1.79	1.83

RS/6000 44P-170 at 450 MHz with 8MB of L2 Cache

	GXT130P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc					
Xmark93	10.02	83.68	92.52	83.69	93.16
SPECplb					
PLBwire93	nr	816.9	811.6	1188.0	1263.0
PLBsurf93	nr	1179.0	1270.0	1640.0	1837.0
SPECviewperf 6.1.2					
AWadv-04	nr	32.550	32.950	71.970	78.080
DRV-07	nr	4.043	4.149	15.190	15.510
DX-06	nr	9.391	9.402	18.010	18.150
Light-04	nr	2.335	2.382	4.029	4.043
MedMCAD-01	nr	9.169	9.174	27.070	28.090
ProSDRS-03	nr	19.630	19.970	33.080	36.790
CATIA and Pro/ENGINEER					
Graper423	nr	11.37	11.84	13.54	14.88

	GXT130P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
CATIA423_CPU	nr	9.559	9.525	9.515	9.534
CATIA423_Cover (sec)*	nr	0.0930	0.0916	0.0574	0.0559
CATIA423_ENGINE (sec)*	nr	0.0574	0.0544	0.0507	0.0454
CATIAV5R6_SAG_CYL	nr	16.10	16.60	18.76	20.35
CATIAV5R6_HOLLAND (sec)*	nr	105.80	105.60	83.82	81.20
PROE2000I2_2000370	nr	1.00	1.01	1.97	2.06

Section 2b - RS/6000 44P-170 - AIX 5.1.0.17

RS/6000 44P-170 333 MHz with 1MB of L2 Cache

	GXT130P	GXT135P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc						
Xmark93	10.40	19.06	68.11	74.05	68.92	75.29
SPECplb						
PLBwire93	nr	nr	566.3	565.1	941.5	949.6
PLBsurf93	nr	nr	836.2	880.2	1256.0	1377.0
SPECviewperf 6.1.2						
AWadv-04	nr	nr	24.090	24.200	57.960	60.000
DRV-07	nr	nr	2.980	3.030	12.860	13.090
DX-06	nr	nr	6.854	6.799	14.420	14.410
Light-04	nr	nr	1.725	1.741	3.170	3.180
MedMCAD-01	nr	nr	6.914	6.849	22.270	22.820
ProSDRS-03	nr	nr	14.510	14.680	31.240	33.050
CATIA and Pro/ENGINEER						
Graper423	nr	nr	8.512	8.803	10.86	11.29
CATIA423_CPU	nr	nr	6.575	5.701	5.659	5.706
CATIA423_Cover (sec)*	nr	nr	0.1215	0.1233	0.0703	0.0698
CATIA423_ENGINE (sec)*	nr	nr	0.0712	0.0718	0.0583	0.0545
CATIAV5R6_SAG_CYL	nr	nr	12.05	12.35	15.27	15.92
CATIAV5R6_HOLLAND (sec)*	nr	nr	154.10	151.80	114.90	111.30
PROE2000I2_2000370	nr	nr	0.66	0.68	1.51	1.55

RS/6000 44P-170 at 400 MHz with 4MB of L2 Cache

	GXT130P	GXT135P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc						
Xmark93	11.14	20.31	77.08	86.25	77.50	85.67
SPECplb						
PLBwire93	nr	nr	703.3	710.5	1109.0	1172.0
PLBsurf93	nr	nr	1009.0	1087.0	1452.0	1632.0
SPECviewperf 6.1.2						
AWadv-04	nr	nr	29.140	29.440	67.250	72.260
DRV-07	nr	nr	3.627	3.669	14.420	15.120
DX-06	nr	nr	8.193	8.332	16.750	16.960
Light-04	nr	nr	2.120	2.099	3.745	3.775

	GXT130P	GXT135P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
MedMCAD-01	nr	nr	8.441	8.516	25.640	26.620
ProSDRS-03	nr	nr	17.640	17.860	32.760	36.110
CATIA and Pro/ENGINEER						
Graper423	nr	nr	10.21	10.59	12.41	13.26
CATIA423_CPU	nr	nr	7.89	7.811	7.753	7.826
CATIA423_Cover (sec)*	nr	nr	0.1028	0.0971	0.0596	0.0575
CATIA423_ENGINE (sec)*	nr	nr	0.0625	0.0593	0.0530	0.0473
CATIAV5R6_SAG_CYL	nr	nr	14.66	15.02	17.70	19.16
CATIAV5R6_HOLLAND (sec)*	nr	nr	122.00	121.70	93.10	91.13
PROE2000I2_2000370	nr	nr	0.85	0.86	1.81	1.85

RS/6000 44P-170 at 450 MHz with 8MB of L2 Cache

	GXT130P	GXT135P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc						
Xmark93	11.47	20.93	83.01	91.55	82.88	91.52
SPECplb						
PLBwire93	nr	nr	804.0	794.5	1169.0	1257.0
PLBsurf93	nr	nr	1122.0	1209.0	1606.0	1801.0
SPECviewperf 6.1.2						
AWadv5-04	nr	nr	32.680	33.240	71.790	77.830
DRV-07	nr	nr	4.021	4.068	14.890	15.360
DX-06	nr	nr	9.355	9.379	17.830	18.050
Light-04	nr	nr	2.382	2.380	4.020	4.042
MedMCAD-01	nr	nr	9.537	9.447	27.080	28.050
ProSDRS-03	nr	nr	19.680	20.200	33.110	36.920
CATIA and Pro/ENGINEER						
Graper423	nr	nr	11.24	11.92	13.53	14.53
CATIA423_CPU	nr	nr	9.503	9.312	9.465	9.255
CATIA423_Cover (sec)*	nr	nr	0.0956	0.0905	0.0582	0.0564
CATIA423_ENGINE (sec)*	nr	nr	0.0587	0.0567	0.0501	0.0457
CATIAV5R6_SAG_CYL	nr	nr	15.79	16.46	18.67	20.29
CATIAV5R6_HOLLAND (sec)*	nr	nr	107.80	105.40	84.66	81.49
PROE2000I2_2000370	nr	nr	0.99	1.00	2.04	2.09

Section 3a - RS/6000 44P-270 - AIX 4.3.3.75

1-way RS/6000 44P-270 at 375 MHz with 4MB of L2 Cache

	GXT130P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc					
Xmark93	9.59	76.82	84.74	76.74	84.31
SPECplb					
PLBwire93	nr	701.6	704.9	1108.0	1172.0
PLBsurf93	nr	1048.0	1126.0	1448.0	1624.0

	GXT130P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECviewperf 6.1.2					
AWadv-04	nr	27.660	27.890	65.290	69.240
DRV-07	nr	3.542	3.552	14.440	14.880
DX-06	nr	7.957	7.961	16.330	16.270
Light-04	nr	2.000	1.916	3.595	3.614
MedMCAD-01	nr	7.715	7.672	25.060	25.680
ProSDRS-03	nr	16.830	16.900	32.690	35.490
CATIA and Pro/ENGINEER					
Graper423	nr	9.856	10.18	12.38	13.45
CATIA423_CPU	nr	7.891	7.855	7.758	7.731
CATIA423_Cover (sec)*	nr	0.1019	0.1033	0.0594	0.0587
CATIA423_ENGINE (sec)*	nr	0.0638	0.0611	0.0521	0.0484
CATIAV5R6_SAG_CYL	nr	14.33	14.70	17.93	19.08
CATIAV5R6_HOLLAND (sec)*	nr	123.80	125.30	95.74	93.36
PROE2000I2_2000370	nr	0.86	0.84	1.75	1.79

2-way RS/6000 44P-270 at 375 MHz with 4MB of L2 Cache

	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc				
Xmark93	_*	_*	_*	_*
SPECplb				
PLBwire93	1135.0	1201.0	1266.0	1388.0
PLBsurf93	1464.0	1623.0	1767.0	2010.0
SPECviewperf 6.1.2				
AWadv-04	_*	_*	_*	_*
DRV-07	_*	_*	_*	_*
DX-06	_*	_*	_*	_*
Light-04	_*	_*	_*	_*
MedMCAD-01	_*	_*	_*	_*
ProSDRS-03	_*	_*	_*	_*
CATIA and Pro/ENGINEER				
Graper423	13.69	14.73	14.25	16.33
CATIA423_CPU	nr	nr	nr	nr
CATIA423_Cover (sec)*	0.0613	0.0596	0.0419	0.0415
CATIA423_ENGINE (sec)*	0.0450	0.0413	0.0441	0.0385
CATIAV5R6_SAG_CYL	20.48	22.17	20.45	23.63
CATIAV5R6_HOLLAND (sec)*	106.60	106.90	81.47	79.41
PROE2000I2_2000370	nr	nr	nr	nr

4-way RS/6000 44P-270 at 375 MHz with 4MB of L2 Cache

	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc				
Xmark93	_*	_*	_*	_*
SPECplb				
PLBwire93	1374.0	1662.0	1196.0	1276.0
PLBsurf93	1836.0	2070.0	1912.0	2244.0

	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECviewperf 6.1.2				
AWadv-04	_*	_*	_*	_*
DRV-07	_*	_*	_*	_*
DX-06	_*	_*	_*	_*
Light-04	_*	_*	_*	_*
MedMCAD-01	_*	_*	_*	_*
ProSDRS-03	_*	_*	_*	_*
CATIA and Pro/ENGINEER				
Graper423	16.25	19.08	15.21	17.54
CATIA423_CPU	nr	nr	nr	nr
CATIA423_Cover (sec)*	0.0367	0.0365	0.0411	0.0411
CATIA423_ENGINE (sec)*	0.0360	0.0307	0.0403	0.0348
CATIAV5R6_SAG_CYL	24.96	28.59	21.82	25.08
CATIAV5R6_HOLLAND (sec)*	nr	nr	nr	nr
PROE2000I2_2000370	nr	nr	nr	nr

2-way RS/6000 44P-270 at 450 MHz with 8MB of L2 Cache

	GXT130P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc					
Xmark93	9.98	82.86	91.36	82.64	91.06
SPECplb					
PLBwire93	nr	1227.0	1358.0	1273.0	1399.0
PLBsurf93	nr	1598.0	1787.0	1864.0	2173.0
SPECviewperf 6.1.2					
AWadv-04	nr	32.380	32.960	72.320	77.550
DRV-07	nr	4.155	4.190	15.500	15.700
DX-06	nr	9.454	9.403	17.650	18.070
Light-04	nr	2.375	2.390	3.913	4.054
MedMCAD-01	nr	8.851	9.146	27.030	27.870
ProSDRS-03	nr	19.700	20.170	33.220	36.780
CATIA and Pro/ENGINEER					
Graper423	nr	15.18	16.48	15.03	17.24
CATIA423_CPU	nr	9.031	9.111	9.196	9.201
CATIA423_Cover (sec)*	nr	0.0540	0.0549	0.0389	0.0384
CATIA423_ENGINE (sec)*	nr	0.0496	0.0377	0.0425	0.0365
CATIAV5R6_SAG_CYL	nr	21.73	23.52	20.93	24.04
CATIAV5R6_HOLLAND (sec)*	nr	92.63	91.16	73.00	69.79
PROE2000I2_2000370	nr	0.99	1.00	2.02	2.04

Section 3b - RS/6000 44P-270 - AIX 5.1.0.17

1-way RS/6000 44P-270 at 375 MHz with 4MB of L2 Cache

	GXT130P	GXT135P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc						
Xmark93	11.00	19.99	75.75	83.16	75.89	83.07
SPECplb						

	GXT130P	GXT135P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
PLBwire93	nr	nr	682.6	686.4	1100.0	1171.0
PLBsurf93	nr	nr	978.4	1072.0	1429.0	1650.0
SPECviewperf 6.1.2						
AWadvs-04	nr	nr	27.690	28.100	65.050	68.870
DRV-07	nr	nr	3.428	3.438	14.280	14.740
DX-06	nr	nr	7.929	7.932	16.130	16.160
Light-04	nr	nr	2.013	2.013	3.594	3.605
MedMCAD-01	nr	nr	7.999	8.080	25.230	25.650
ProSDRS-03	nr	nr	16.900	16.860	32.620	35.370
CATIA and Pro/ENGINEER						
Graper423	nr	nr	9.934	10.31	12.3	13.05
CATIA423_CPU	nr	nr	7.652	7.843	7.781	7.794
CATIA423_Cover (sec)*	nr	nr	0.1061	0.1002	0.0601	0.0588
CATIA423_ENGINE (sec)*	nr	nr	0.0647	0.0624	0.0522	0.0483
CATIAV5R6_SAG_CYL	nr	nr	14.31	14.63	17.75	18.92
CATIAV5R6_HOLLAND (sec)*	nr	nr	127.40	125.30	96.69	92.54
PROE2000I2_2000370	nr	nr	0.84	0.84	1.79	1.82

2-way RS/6000 44P-270 at 375 MHz with 4MB of L2 Cache

	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc				
Xmark93	-*	-*	-*	-*
SPECplb				
PLBwire93	1127.0	1182.0	1271.0	1392.0
PLBsurf93	1416.0	1569.0	1788.0	2038.0
SPECviewperf 6.1.2				
AWadvs-04	-*	-*	-*	-*
DRV-07	-*	-*	-*	-*
DX-06	-*	-*	-*	-*
Light-04	-*	-*	-*	-*
MedMCAD-01	-*	-*	-*	-*
ProSDRS-03	-*	-*	-*	-*
CATIA and Pro/ENGINEER				
Graper423	13.76	14.61	14.00	16.14
CATIA423_CPU	nr	nr	nr	nr
CATIA423_Cover (sec)*	0.0619	0.0588	0.0432	0.0420
CATIA423_ENGINE (sec)*	0.0456	0.0420	0.0439	0.0384
CATIAV5R6_SAG_CYL	20.51	22.33	20.51	23.63
CATIAV5R6_HOLLAND (sec)*	108.00	107.00	82.10	80.60
PROE2000I2_2000370	nr	nr	nr	nr

4-way RS/6000 44P-270 at 375 MHz with 4MB of L2 Cache

	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc				
Xmark93	-*	-*	-*	-*
SPECplb				

	GXT4000P	GXT4500P	GXT6000P	GXT6500P
PLBwire93	1374.0	1657.0	1191.0	1283.0
PLBsurf93	1807.0	2032.0	1910.0	2231.0
SPECviewperf 6.1.2				
AWadvs-04	_*	_*	_*	_*
DRV-07	_*	_*	_*	_*
DX-06	_*	_*	_*	_*
Light-04	_*	_*	_*	_*
MedMCAD-01	_*	_*	_*	_*
ProSDRS-03	_*	_*	_*	_*
CATIA and Pro/ENGINEER				
Graper423	16.29	18.76	15.07	17.58
CATIA423_CPU	nr	nr	nr	nr
CATIA423_Cover (sec)*	0.0379	0.0361	0.0415	0.0408
CATIA423_ENGINE (sec)*	0.0357	0.0309	0.0403	0.0345
CATIAV5R6_SAG_CYL	25.14	28.98	21.93	25.36
CATIAV5R6_HOLLAND (sec)*	nr	nr	nr	nr
PROE2000I2_2000370	nr	nr	nr	nr

2-way RS/6000 44P-270 at 450 MHz with 8MB of L2 Cache

	GXT130P	GXT135P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc						
Xmark93	11.45	20.88	81.72	90.16	81.78	90.11
SPECplb						
PLBwire93	nr	nr	1215.0	1339.0	1273.0	1399.0
PLBsurf93	nr	nr	1546.0	1729.0	1861.0	2162.0
SPECviewperf 6.1.2						
AWadvs-04	nr	nr	32.680	33.040	71.610	77.560
DRV-07	nr	nr	4.037	4.084	15.340	15.810
DX-06	nr	nr	9.333	9.298	17.930	17.960
Light-04	nr	nr	2.395	2.403	4.043	4.060
MedMCAD-01	nr	nr	9.597	9.606	27.320	27.910
ProSDRS-03	nr	nr	19.250	20.290	33.230	36.740
CATIA and Pro/ENGINEER						
Graper423	nr	nr	15.17	16.79	15.08	17.43
CATIA423_CPU	nr	nr	9.051	9.223	9.2	9.137
CATIA423_Cover (sec)*	nr	nr	0.0554	0.0529	0.0391	0.0400
CATIA423_ENGINE (sec)*	nr	nr	0.0434	0.0385	0.0429	0.0364
CATIAV5R6_SAG_CYL	nr	nr	21.96	23.94	20.96	24.22
CATIAV5R6_HOLLAND (sec)*	nr	nr	93.63	92.48	72.51	71.46
PROE2000I2_2000370	nr	nr	0.98	0.98	2.02	2.05

4-way RS/6000 44P-270 at 450 MHz with 8MB of L2 Cache

	GXT130P	GXT135P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
SPECxpc						
Xmark93	_*	_*	_*	_*	_*	_*
SPECplb						

	GXT130P	GXT135P	GXT4000P	GXT4500P	GXT6000P	GXT6500P
PLBwire93	nr	nr	1387.0	1745.0	1202.0	1293.0
PLBsurf93	nr	nr	1983.0	2213.0	1931.0	2290.0
SPECviewperf 6.1.2						
AWadvs-04	nr	nr	nr	nr	nr	nr
DRV-07	nr	nr	nr	nr	nr	nr
DX-06	nr	nr	nr	nr	nr	nr
Light-04	nr	nr	nr	nr	nr	nr
MedMCAD-01	nr	nr	nr	nr	nr	nr
ProSDRS-03	nr	nr	nr	nr	nr	nr
CATIA and Pro/ENGINEER						
Graper423	nr	nr	17.32	20.16	15.78	18.17
CATIA423_CPU	nr	nr	nr	nr	nr	nr
CATIA423_Cover (sec)*	nr	nr	0.0325	0.0337	0.0419	0.0422
CATIA423_ENGINE (sec)*	nr	nr	0.0356	0.0291	0.0408	0.0350
CATIAV5R6_SAG_CYL	nr	nr	26.06	30.29	22.09	25.84
CATIAV5R6_HOLLAND (sec)*	nr	nr	nr	nr	nr	nr
PROE2000I2_2000370	nr	nr	nr	nr	nr	nr

Section 4a - IntelliStation POWER 265 - AIX 4.3.3.75

1-way IntelliStation POWER 265

	GXT135P	GXT4500P	GXT6500P
SPECxpc			
Xmark93	20.93	91.57	91.17
SPECplb			
PLBwire93	nr	799.6	1254.0
PLBsurf93	nr	1259.0	1790.0
SPECviewperf 6.1.2			
AWadvs-04	nr	32.600	76.100
DRV-07	nr	3.951	15.380
DX-06	nr	9.305	17.900
Light-04	nr	2.369	4.041
MedMCAD-01	nr	9.126	27.100
ProSDRS-03	nr	19.170	35.940
CATIA and Pro/ENGINEER			
Graper423	nr	11.42	13.90
CATIA423_CPU	nr	9.218	8.917
CATIA423_Cover (sec)*	nr	0.0921	0.0562
CATIA423_ENGINE (sec)*	nr	0.0589	0.0469
CATIAV5R6_SAG_CYL	nr	15.86	19.71
CATIAV5R6_HOLLAND (sec)*	nr	109.20	85.06
PROE2000I2_2000370	nr	0.99	1.98

2-way IntelliStation POWER 265

	GXT4500P	GXT6500P
SPECxpc		
Xmark93	-*	-*
SPECplb		
PLBwire93	1316.0	1389.0
PLBsurf93	1736.0	2140.0
SPECviewperf 6.1.2		
AWadvs-04	-*	-*
DRV-07	-*	-*
DX-06	-*	-*
Light-04	-*	-*
MedMCAD-01	-*	-*
ProSDRS-03	-*	-*
CATIA and Pro/ENGINEER		
Graper423	15.53	16.71
CATIA423_CPU	nr	nr
CATIA423_Cover (sec)*	0.0556	0.0411
CATIA423_ENGINE (sec)*	0.0391	0.0379
CATIAV5R6_SAG_CYL	23.20	23.80
CATIAV5R6_HOLLAND (sec)*	93.74	72.78
PROE2000I2_2000370	nr	nr

Section 4b - IntelliStation POWER 265 - AIX 5.1.0.17

1-way IntelliStation POWER 265

	GXT135P	GXT4500P	GXT6500P
SPECxpc			
Xmark93	20.79	90.59	90.61
SPECplb			
PLBwire93	nr	782.8	1212.0
PLBsurf93	nr	1199.0	1691.0
SPECviewperf 6.1.2			
AWadvs-04	nr	33.060	74.770
DRV-07	nr	3.790	15.300
DX-06	nr	9.274	17.540
Light-04	nr	2.384	4.040
MedMCAD-01	nr	9.425	26.860
ProSDRS-03	nr	18.950	36.170
CATIA and Pro/ENGINEER			
Graper423	nr	11.42	14.00
CATIA423_CPU	nr	8.911	8.773
CATIA423_Cover (sec)*	nr	0.0909	0.0576
CATIA423_ENGINE (sec)*	nr	0.0565	0.0466
CATIAV5R6_SAG_CYL	nr	15.87	19.34

	GXT135P	GXT4500P	GXT6500P
CATIAV5R6_HOLLAND (sec)*	nr	110.20	84.68
PROE2000I2_2000370	nr	0.97	1.99

2-way IntelliStation POWER 265

	GXT4500P	GXT6500P
SPECxpc		
Xmark93	-*	-*
SPECplb		
PLBwire93	1223.0	1385.0
PLBsurf93	1697.0	2084.0
SPECviewperf 6.1.2		
AWadvs-04	-*	-*
DRV-07	-*	-*
DX-06	-*	-*
Light-04	-*	-*
MedMCAD-01	-*	-*
ProSDRS-03	-*	-*
CATIA and Pro/ENGINEER		
Graper423	15.67	16.55
CATIA423_CPU	nr	nr
CATIA423_Cover (sec)*	0.0550	0.0406
CATIA423_ENGINE (sec)*	0.0402	0.0377
CATIAV5R6_SAG_CYL	23.37	23.90
CATIAV5R6_HOLLAND (sec)*	93.76	73.14
PROE2000I2_2000370	nr	nr

nr - Not reported

-* - Approximately the same performance as a single processor version of the same workstation with the same processor.

* - Benchmark measurement is time in seconds; therefore, a smaller number means better performance.

NOTES ON PERFORMANCE BENCHMARKS AND VALUES

Values shown here are the results of development-level systems. All performance data was obtained in a specific environment and is presented "as is" for illustrative purposes only. While these values should be indicative of generally-available systems, no warranties or guarantees are stated or implied by IBM. IBM recommends application-oriented testing for performance predictions and offers the above commonly reported benchmarks only as an initial indicator. Additional information on these tests is available from your IBM Sales Representative or IBM Business Partner. Additional information can also be obtained on the World Wide Web at: <http://www.spec.org>.

The following SPECgpc benchmarks reflect the performance of the microprocessor, memory subsystem, and graphics adapter.

SPECxpc results

Xmark93 is the weighted geometric mean of 447 tests executed in the x11perf suite and is an indicator of 2D graphics performance in an X environment. Larger values indicate better performance. Xmark93 is no longer a SPECxpc published benchmark.

SPECplb results (graPHIGS)

PLBwire93 and PLBsurf93 are geometric means of literal and optimized Picture Level Benchmark (PLB) tests for 3D wireframe and 3D surface tests, respectively. The benchmark and tests were developed by the Graphics Performance Characterization (SPECgpc) Committee of SPEC. The results shown used the graPHIGS API. Larger values indicate better performance. The visuals were 24 bits on all configurations.

SPECviewperf 6.1.2 results

DX-06, DRV-07, Light-04, AWadv-04, medMCAD-01 and ProCDRS-03 are weighted geometric means of individual viewset metrics. The viewsets were developed by ISVs (Independent Software Vendors) with the assistance of SPECopc (OpenGL Performance Characterization) member companies. Larger values indicate better performance. The tests were run with 24 bit visuals.

The following environment variables were used for the 44P-270 systems: `_OGL_UQ_BUFFERS=128` and `_OGL_DL_OPT_BLOCK = 1000` were used for ProCDRS-03 and medMCAD-01 benchmark.

The environment variable `GS_BUFFER_SWAP_MODE=l` was used for all the benchmark tests. Tests were executed on configurations with 128MB of system memory on the 43P-150, 256MB was used for 44P-170 and 44P-270 and 512MB for the IntelliStation POWER 265. The display resolution was 1280x1024 and the refresh rate was 75 Hz for all tests.



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