

# Lawrence Berkeley National Laboratory

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### Title

TOP500 Supercomputers for June 2002

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## **19th Edition of TOP500 List of World's Fastest Supercomputers Released**

MANNHEIM, Germany; KNOXVILLE, Tenn.; & BERKELEY, Calif. – In what has become a much-anticipated event in the world of high-performance computing, the 19<sup>th</sup> edition of the “TOP500” list of the world’s fastest supercomputers was released today (June 20,2002).

The recently installed Earth Simulator supercomputer at the Earth Simulator Center in Yokohama, Japan, is – as expected – the clear new number 1. Its performance of 35.86 Tflop/s (trillions of calculations per second) running the Linpack benchmark is almost five times higher than the performance of the now #2 IBM ASCI White system at Lawrence Livermore National Laboratory (7.2 Tflop/s). This powerful leapfrogging to the top by a system so much faster than the previous top system is unparalleled in the history of the TOP500.

The new TOP500 list, as well as the former lists, can be found on the Web at <http://www.top500.org/>.

Hypothetically one would need to combine the next 12 systems on the TOP500 to match the performance of the Earth Simulator system built by NEC. Its architecture is largely based on the NEC SX-6 line of vector-systems, which are sold in the USA by Cray Inc. The size of the Earth Simulator can be illustrated by the fact that before the June 1999 TOP500 list, the sum of all 500 systems on this biannual list was smaller than 30 Tflop/s and thus did not exceed the performance level of the Earth Simulator.

The latest edition of the TOP500 finds Hewlett-Packard as the leader in the field, with 168 installed systems - only slightly ahead of IBM with 164 systems. The merger of Hewlett-Packard and Compaq is one of the main reasons for HP being ahead of IBM. The number of installed systems has actually changed only little compared to six months ago, if HP and Compaq are considered together.

In terms of total performance of all the installed systems IBM is still the clear leader with 33.3percent, ahead of HP with 22.2 percent and NEC with 19 percent. No other company was able to gain more than 8 percent in either of these two categories.

The list is compiled by Hans Meuer of the University of Mannheim, Germany, Erich Strohmaier and Horst Simon of the U.S. Department of Energy’s National Energy Research Scientific Computing Center at Lawrence Berkeley National Laboratory, and Jack Dongarra of the University of Tennessee. The list was released today at the ISC2002 Conference in Heidelberg, Germany.

The list exhibits unbroken growth at all ranges of performance. The total combined performance of all 500 computers on the list is 222 Tflop/s, compared to 134.4 Tflop/s six months ago. The “slowest” system on the newest listing is now 134.3 Gflop/s (billions of calculations per second), compared to 94.3 Gflop/s 6 months ago. The list now indicates 23 systems exceeding the 1 Tflop/s level using the Linpack benchmark. The TOP500 already contains 70 systems exceeding 1 Tflop/s level for peak performance.

A total of 42 Intel-based and 7 AMD-based PC clusters are now present in the TOP500. Thirty-one of the Intel-based PC clusters are IBM Netfinity systems delivered by IBM. A substantial number of these are installed at industrial sites, especially in the

oil-industry. Together with five SunSparc and five Alpha-based clusters and 21 HP AlphaServers, the number of clusters in the TOP500 grew impressively to a total of 80 systems. Fourteen of these clusters are labeled as 'Self-Made' as they are designed and assembled by the end users themselves.

HP captured the major part of the high-end Telecom market (about 2/3 of systems and IBM and Sun each about 1/6).

Eight of the TOP10 systems are installed in the United States, which demonstrates the leadership of the U.S. in the usage of High Performance Computing.

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## All changes are from November 2001 to June 2002:

### Highlights from the Top 10:

- The Earth Simulator build by NEC is the new #1.
- It has a record lead to the #2 of a factor of almost 5 in Linpack performance.
- It equals the sum of the Linpack performance of the next 12 systems.
- Only on the June 1999 TOP500 list did the sum of all 500 systems on the list exceed the performance level of the ES. Before this the aggregate performance of all 500 system was smaller then 30TF/s.
- Three more systems are new in the TOP10:
  - at #4 with 4 TF/s a Hewlett-Packard AlphaServer installed in France at the CEA (Commissariat a l'Energie Atomique).
  - at #8 with 2.3 TF/s a IBM Power4 system connected with the new IBM SP switch installed at the Oak Ridge National Lab.
  - and at #10 with 2 TF/s a similar IBM system currently tested at Poughkeepsie for shipment to the US Army Research Laboratory (ARL)
- 2 TF/s Linpack performance are needed to enter the TOP10
- 5 of the TOP10 systems are from IBM, 3 from HP, and one from NEC, and Intel (ASCI Red).
- 8 of the TOP10 systems are installed in the US, and one in Japan and France each.

### General highlights from the Top 500:

- The number of systems exceeding the 1 TFflop/s mark on the Linpack is now 23 up from to 17
- 70 systems have peak performance above 1 TFlop/s up from 30 systems 6 month ago
- The new entry level of 134 GF/s would have been enough to be listed on position 280 in the last TOP500 just 6 month ago.
- Total accumulated performance is 222 TFlop/s compared to 134 TFlop/s 6 month ago.
- Entry level is now 134.3 GF/s compared to 94.3 GF/s 6 month ago.
- The entry point for the top100 moved from 300 GF/s to 447 GF/s.
- The first PC Cluster (#35 with 825 GF/s) is based on AMD Athlons and installed at the IWR at the University of Heidelberg in Germany.
- A total of 42 Intel based and 7 AMD based PC cluster are in the TOP500.
- 31 of these Intel based cluster are IBM Netfinity systems delivered by IBM. A substantial part of these are installed at industrial customers especially in the oil-industry.
- Including 5 Sun and 5 Alpha based clusters and 21 HP AlphaServer, the number of clusters in the top500 grew impressivly to 80 systems.
- 14 of these clusters are labeled as 'Self-Made'.
- HP captured the major part of the high-end Telecom market (about 2/3 of systems and IBM and Sun each about 1/6)

### Trends over time:

- The US keeps it's prime position as supercomputer user and producer with only little changes in geographical distribution.

- The only exception to this is caused by the ES which propels Japan with respect to installed performance ahead of Europe
- Otherwise the number of systems installed in Japan decreased slightly despite the ES.
  
- Hewlett-Packard is taking the lead from IBM with respect to the number of systems installed.  
This is largely due to the merger of HP and Compaq.
- If compared to the combined number of systems both companies had 6 months ago, not much has changed.
- HP (and Compaq) stayed at 168 systems (169 in November 2001) and IBM stayed at 164 systems slightly up from 160.
- IBM is still leading the list with respect to the installed performance with a stable share of 33.3% ahead of HP 22.2% and NEC with 19%.
  
- No other manufacturer is currently able to capture more than 8% in any category.

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# TOP500 Sublist for June 2002

TOP500 Team

<http://www.top500.org/>



Rank	Site	Manufacturer	Computer	Inst. type	Country	Year	Rmax	Processors	Rpeak	Nmax	Nhalf	Interconnect
1	The Earth Simulator Center	NEC	Earth-Simulator	Research	Japan	2002	35860.00	5120	40960.00	1075200	266240	Crossbar
2	Lawrence Livermore National Laboratory	IBM	ASCI White, SP Power3 375 MHz	Research	United States	2000	7226.00	8192	12288.00	518096	179000	SP Switch
3	Pittsburgh Supercomputing Center	Hewlett-Packard	AlphaServer SC45, 1 GHz	Academic	United States	2001	4463.00	3016	6032.00	280000	85000	Quadrics
4	Commissariat a l'Energie Atomique (CEA)	Hewlett-Packard	AlphaServer SC45, 1 GHz	Research	France	2001	3980.00	2560	5120.00	360000	85000	Quadrics
5	NERSC/LBNL	IBM	SP Power3 375 MHz 16 way	Research	United States	2001	3052.00	3328	4992.00	371712	102400	SP Switch
6	Los Alamos National Laboratory	Hewlett-Packard	AlphaServer SC45, 1 GHz	Research	United States	2002	2916.00	2048	4096.00	272000		Quadrics
7	Sandia National Laboratories	Intel	ASCI Red	Research	United States	1999	2379.00	9632	3207.00	362880	75400	Proprietary
8	Oak Ridge National Laboratory	IBM	pSeries 690 Turbo 1.3GHz	Research	United States	2002	2310.00	864	4492.80	275000	62000	SP Switch
9	Lawrence Livermore National Laboratory	IBM	ASCI Blue-Pacific SST, IBM SP 604e	Research	United States	1999	2144.00	5808	3856.50	431344		SP Switch
10	IBM/US Army Research Laboratory (ARL)	IBM	pSeries 690 Turbo 1.3GHz	Vendor	United States	2002	2050.00	768	3993.60	252000		SP Switch
11	Atomic Weapons Establishment	IBM	SP Power3 375 MHz 16 way	Classified	United Kingdom	2002	1910.00	1920	2880.00			SP Switch
12	IBM/ECMWF	IBM	pSeries 690 Turbo 1.3GHz	Vendor	United States	2002	1849.00	704	3660.80	240000	32500	SP Switch
13	University of Tokyo	Hitachi	SR8000/MPP	Academic	Japan	2001	1709.10	1152	2074.00	141000	16000	Crossbar
14	Leibniz Rechenzentrum	Hitachi	SR8000-F1/168	Academic	Germany	2002	1653.00	168	2016.00	160000	19560	Crossbar
15	Los Alamos National Laboratory	SGI	ASCI Blue Mountain	Research	United States	1998	1608.00	6144	3072.00	374400	138000	HIPPI
16	Naval Oceanographic Office (NAVOCEANO)	IBM	SP Power3 375 MHz	Research	United States	2000	1417.00	1336	2004.00	374000		SP Switch
17	Deutscher Wetterdienst	IBM	SP Power3 375 MHz 16 way	Research	Germany	2001	1293.00	1280	1920.00			SP Switch
18	NCAR (National Center for Atmospheric Research)	IBM	SP Power3 375 MHz 16 way	Research	United States	2001	1272.00	1260	1890.00			SP Switch
19	Osaka University	NEC	SX-5/128M8 3.2ns	Academic	Japan	2001	1192.00	128	1280.00	129536	10240	Crossbar
20	National Centers for Environmental Prediction	IBM	SP Power3 375 MHz	Research	United States	2000	1179.00	1104	1656.00			SP Switch
21	National Centers for Environmental Prediction	IBM	SP Power3 375 MHz	Research	United States	2001	1179.00	1104	1656.00			SP Switch
22	Government	Cray Inc.	T3E1200	Classified	United States	2001	1166.00	1900	2280.00	230016		Cray Interconnect
23	ERDC MSRC	Cray Inc.	T3E1200/900	Research	United States	1999	1166.00	1792	1999.00	230016		Cray Interconnect
24	Lawrence Livermore National Laboratory	IBM	SP Power3 375 MHz 16 way	Research	United States	2001	1100.00	1088	1632.00			SP Switch
25	NEC Fuchu Plant	NEC	SX-6/128M16	Vendor	Japan	2002	982.00	128	1024.00	204800	12800	Crossbar
26	UCSD/San Diego Supercomputer Center	IBM	SP Power3 375 MHz 8 way	Academic	United States	2000	929.00	1152	1728.00	220000	62000	SP Switch
27	High Energy Accelerator Research Organization /KEK	Hitachi	SR8000-F1/100	Research	Japan	2000	917.00	100	1200.00	115000	15000	Crossbar
28	US Army HPC Research Center at NCS	Cray Inc.	T3E1200	Research	United States	2000	892.00	1084	1300.80			Cray Interconnect
29	ECMWF	Fujitsu	VPP5000/100	Research	United Kingdom	2000	886.00	100	960.00	195600	18000	Crossbar
30	University of Tokyo	Hitachi	SR8000/128	Academic	Japan	1999	873.00	128	1024.00	120000	16000	Crossbar
31	Maui High-Performance Computing Center (MHPC)	IBM	SP Power3 375 MHz 16 way	Research	United States	2001	837.00	812	1218.00			SP Switch
32	CINECA	IBM	pSeries 690 Turbo 1.3GHz GigEth	Academic	Italy	2002	826.50	512	2662.40			Gigabit Ethernet
33	CSC (Center for Scientific Computing)	IBM	pSeries 690 1.1GHz GigEth	Academic	Finland	2002	826.50	512	2253.00	185000	60000	Gigabit Ethernet
34	Florida State University	IBM	pSeries 690 1.1GHz GigEth	Academic	United States	2002	826.50	512	2253.00	185000	60000	Gigabit Ethernet
35	Universitaet Heidelberg - IWR	Megware	HELICS AMD 1.4 GHz - Myrinet	Academic	Germany	2002	825.00	512	1433.60	171000		Myrinet
36	Government	Cray Inc.	T3E900	Classified	United States	1997	815.00	1324	1191.60	134400	26880	Cray Interconnect
37	ERDC MSRC	Hewlett-Packard	AlphaServer SC45, 1 GHz	Research	United States	2002	809.00	512	1024.00	215000	27000	Quadrics
38	NASA/Goddard Space Flight Center	Hewlett-Packard	AlphaServer SC45, 1 GHz	Research	United States	2002	809.00	512	1024.00	215000	27000	Quadrics
39	Wright-Patterson Air Force Base/DoD ASC	Hewlett-Packard	AlphaServer SC45, 1 GHz	Research	United States	2002	809.00	512	1024.00	215000	27000	Quadrics
40	Charles Schwab	IBM	SP Power3 375 MHz	Industry	United States	2000	795.00	768	1152.00			SP Switch
41	Institute for Materials Research/Tohoku University	Hitachi	SR8000-G1/64	Academic	Japan	2001	790.70	64	921.60	110000	8504	Crossbar
42	Australian Partnership for Advanced Computing (APAC)	Hewlett-Packard	AlphaServer SC45, 1 GHz	Academic	Australia	2001	772.00	480	960.00	140000	22950	Quadrics
43	North Carolina Supercomputing Center (NCSC)	IBM	SP Power3 375 MHz	Academic	United States	2000	741.00	720	1080.00			SP Switch

Rank	Site	Manufacturer	Computer	Inst. type	Country	Year	Rmax	Processors	Rpeak	Nmax	Nhalf	Interconnect
44	IBM	IBM	pSeries 690 Turbo 1.3GHz	Vendor	United States	2002	736.60	256	1331.20	285000	25000	SP Switch
45	University of Tsukuba	Fujitsu	VPP5000/80	Research	Japan	2001	730.00	80	768.00	273600	15360	Crossbar
46	Oak Ridge National Laboratory	IBM	SP Power3 375 MHz	Research	United States	2000	723.00	704	1056.00	187000	37500	SP Switch
47	GSIC Center, Tokyo Institute of Technology	Self-made	Presto III Athlon 1.6 GHz	Academic	Japan	2002	716.10	480	1536.00	100000		Myrinet
48	HLRN at Universitaet Hannover / RRZN	IBM	pSeries 690 Turbo 1.3GHz GigEth	Academic	Germany	2002	708.00	384	1996.80			Gigabit Ethernet
49	HLRN at ZIB/Konrad Zuse-Zentrum fuer Informationstechnik	IBM	pSeries 690 Turbo 1.3GHz GigEth	Academic	Germany	2002	708.00	384	1996.80			Gigabit Ethernet
50	Sandia National Laboratories	Self-made	CPlant/Ross Cluster	Research	United States	2001	706.70	1369	1275.90	162000		Myrinet
51	Japan Meteorological Agency	Hitachi	SR8000-E1/80	Research	Japan	2000	691.30	80	768.00	120000	9408	Crossbar
52	Los Alamos National Laboratory/ACL	SGI	ORIGIN 2000 250 MHz	Research	United States	1999	690.90	2048	1024.00	229248	80640	Crossbar
53	NCSA	IBM	Titan Cluster Itanium 800 MHz	Academic	United States	2001	677.90	320	1024.00	183000	32000	Fast Ethernet
54	CSAR at the University of Manchester	Cray Inc.	T3E1200	Academic	United Kingdom	2000	671.00	812	974.40			Cray Interconnect
55	Deutscher Wetterdienst	Cray Inc.	T3E1200	Research	Germany	1999	671.00	812	974.40			Cray Interconnect
56	CBRC - Tsukuba Advanced Computing Center - TACC/AIST	NEC	Magi Cluster PIII 933 MHz	Research	Japan	2001	654.00	1040	970.00	217600	29000	Myrinet
57	Real World Computing (RWCP)/Tsukuba Research Center	Self-made	SCore IIIe/PIII 933 MHz	Research	Japan	2001	618.30	1024	955.40	146000	23000	Myrinet
58	NCSA	IBM	Netfinity Cluster PIII 1 GHz - Myrinet	Academic	United States	2001	594.00	1024	1024.00			Myrinet
59	CNRS/IDRIS	IBM	pSeries 690 Turbo 1.3 GHz, GigEth	Academic	France	2002	590.20	256	1331.20	158000		Gigabit Ethernet
60	National Center for High Performance Computing	IBM	pSeries 690 Turbo 1.3 GHz, GigEth	Academic	Taiwan	2002	590.20	256	1331.20	158000		Gigabit Ethernet
61	Swiss Scientific Computing Center (CSCS)	IBM	pSeries 690 Turbo 1.3 GHz, GigEth	Research	Switzerland	2002	590.20	256	1331.20	158000		Gigabit Ethernet
62	University of Tokyo/Institute for Solid State Physics	Hitachi	SR8000-F1/60	Academic	Japan	2000	577.00	60	720.00	89000	10000	Crossbar
63	Colsa	IBM	pSeries 690 Turbo 1.3 GHz, GigEth	Industry	United States	2002	564.00	240	1248.00			Gigabit Ethernet
64	Joint Supercomputer Center	Self-made	MVS1000M EV67 667 MHz	Academic	Russia	2002	564.00	768	1024.00	230000	37440	Myrinet
65	Japan Atomic Energy Research Institute	Fujitsu	VPP5000/64	Research	Japan	2001	563.00	64	614.40	235776	12288	Crossbar
66	Kyushu University	Fujitsu	VPP5000/64	Academic	Japan	2000	563.00	64	614.40	235776	12288	Crossbar
67	Sprint PCS	IBM	SP Power3 375 MHz 16 way	Industry	United States	2002	561.00	528	792.00			SP Switch
68	Institute of High Performance Computing (IHPC)	IBM	pSeries 690 Turbo 1.3GHz GigEth	Academic	Singapore	2002	555.30	224	1164.80	226800		Gigabit Ethernet
69	Manufacturer (G)	IBM	pSeries 690 Turbo 1.3GHz GigEth	Industry	United States	2002	555.30	224	1164.80	226800		Gigabit Ethernet
70	IBM Thomas J. Watson Research Center	IBM	SP Power3 375 MHz 16 way	Research	United States	2002	554.00	520	780.00			SP Switch
71	Deutsche Telekom AG	IBM	SP Power3 375 MHz	Industry	Germany	2000	553.00	528	792.00			SP Switch
72	Wright-Patterson Air Force Base/DoD ASC	IBM	SP Power3 375 MHz	Research	United States	2000	553.00	528	792.00			SP Switch
73	United Kingdom Meteorological Office	Cray Inc.	T3E900	Research	United Kingdom	1997	552.00	876	788.40			Cray Interconnect
74	State Farm	IBM	SP Power3 375 MHz	Industry	United States	2001	546.00	520	780.00			SP Switch
75	Petroleum Company (G)	IBM	SP Power3 375 MHz 16 way	Industry	Saudia Arabia	2001	546.00	512	768.00	148000	33000	SP Switch
76	US Army Research Laboratory (ARL)	IBM	SP Power3 375 MHz 16 way	Research	United States	2000	546.00	512	768.00	148000	33000	SP Switch
77	Pharmaceutical Company	IBM	SP Power3 375 MHz	Industry	Germany	2001	536.00	510	765.00			SP Switch
78	Indiana University	IBM	SP Power3 375 MHz	Academic	United States	2001	534.00	508	762.00			SP Switch
79	Sandia National Laboratories	Dell	Precision 530 Cluster P4 XEON 2.0 GHz	Research	United States	2002	526.00	256	1024.00	101000		Fast Ethernet
80	United Kingdom Meteorological Office	Cray Inc.	T3E1200	Research	United Kingdom	1999	526.00	636	763.20			Cray Interconnect
81	NASA/Goddard Space Flight Center	Cray Inc.	T3E	Research	United States	2000	525.00	1356	813.60			Cray Interconnect
82	Max-Planck-Gesellschaft MPI/IPP	IBM	pSeries 690 Turbo 1.3GHz GigEth	Research	Germany	2002	513.00	208	1081.60			Gigabit Ethernet
83	State Farm	IBM	SP Power3 375 MHz	Industry	United States	2001	512.00	488	732.00			SP Switch
84	Wright-Patterson Air Force Base/DoD ASC	Hewlett-Packard	AlphaServer SC45, 1 GHz	Research	United States	2002	512.00	324	648.00	170000	20000	Quadrics
85	Hewlett-Packard	Hewlett-Packard	AlphaServer SC ES40/EV67	Vendor	United States	2000	507.60	512	682.66	200000	30000	Quadrics
86	Lawrence Livermore National Laboratory	Hewlett-Packard	AlphaServer SC ES40/EV67	Research	United States	2000	507.60	512	682.66	200000	30000	Quadrics



Rank	Site	Manufacturer	Computer	Inst. type	Country	Year	Rmax	Processors	Rpeak	Nmax	Nhalf	Interconnect
87	DKRZ - Deutsches Klimarechenzentrum	NEC	SX-6/64M8	Research	Germany	2002	495.20	64	512.00	122880	6656	Crossbar
88	National Aerospace Laboratory of Japan	NEC	SX-6/64M8	Research	Japan	2002	495.20	64	512.00	122880	6656	Crossbar
89	National Institute for Environmental Studies	NEC	SX-6/64M8	Research	Japan	2002	495.20	64	512.00	122880	6656	Crossbar
90	Centre Informatique National (CINES)	IBM	SP Power3 375 MHz	Academic	France	2001	494.00	472	708.00			SP Switch
91	Nagoya University	Fujitsu	VPP5000/56	Academic	Japan	1999	492.00	56	537.60	228480	12768	Crossbar
92	Kyoto University	Fujitsu	VPP800/63	Academic	Japan	1999	482.00	63	504.00	234360	12852	Crossbar
93	Umea University / HPC2N	Self-made	AMD 1.66 GHz - SCI 3D-torus	Academic	Sweden	2002	481.00	240	800.00	116100	24570	SCI
94	Lawrence Livermore National Laboratory	IBM	SP Power3 375 MHz 16 way	Research	United States	2001	480.00	448	672.00	138000	31000	SP Switch
95	EDS/ Adam Opel AG	IBM	pSeries 690 Turbo 1.3GHz GigEth	Industry	Germany	2002	472.00	192	998.40			Gigabit Ethernet
96	Hewlett-Packard	Hewlett-Packard	SuperDome 750 MHz/HyperFabric	Vendor	United States	2002	470.90	256	768.00	340092	90072	Myrinet
97	Lawrence Livermore National Laboratory	IBM	ASCI Blue-Pacific CTR, IBM SP 604e	Research	United States	1998	468.20	1344	892.40	205000	65000	SP Switch
98	Hewlett-Packard	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Vendor	United States	2002	449.40	256	768.00	340092	110052	Myrinet
99	Tsukuba Advanced Computing Center - TACC/AIST	Hitachi	SR8000/64	Research	Japan	1999	449.00	64	512.00	92000	9160	Crossbar
100	Cray Inc.	Cray Inc.	T3E1200	Vendor	United States	1998	447.00	540	648.00	181440	17280	Cray Interconnect
101	Forschungszentrum Juelich (FZJ)	Cray Inc.	T3E1200	Research	Germany	1999	447.00	540	648.00	181440	17280	Cray Interconnect
102	Government	Cray Inc.	T3E1200	Classified	United States	1999	447.00	540	648.00	181440	17280	Cray Interconnect
103	Government	Cray Inc.	T3E1200	Classified	United States	2001	447.00	540	648.00	181440	17280	Cray Interconnect
104	Government	Cray Inc.	T3E1200	Classified	United States	1998	447.00	540	648.00	181440	17280	Cray Interconnect
105	NERSC/LBNL	Cray Inc.	T3E900	Research	United States	1997	444.00	692	622.80			Cray Interconnect
106	Forecast Systems Laboratory - NOAA	HPiTi	ACL-580	Research	United States	2001	442.70	580	841.00	170000		Myrinet
107	University of Nebraska	Atipa Technology	Prairiefire AMD 1.4 GHz - Myrinet	Academic	United States	2002	442.50	256	716.80	112000	30000	Myrinet
108	Financial Institution	IBM	SP Power3 375 MHz	Industry	Hong Kong	2000	441.00	424	636.00			SP Switch
109	University of Kentucky	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Academic	United States	2001	431.70	224	672.00			Myrinet
110	Government	IBM	pSeries 690 Turbo 1.3GHz GigEth	Classified	United States	2002	430.00	176	915.20			Gigabit Ethernet
111	Postbank	IBM	pSeries 690 Turbo 1.3GHz GigEth	Industry	Germany	2002	430.00	176	915.20			Gigabit Ethernet
112	Defense	Sun Microsystems	HPC 4500 400 MHz Cluster	Classified	Sweden	1999	420.44	896	716.80	144000	43200	N/A
113	Service Provider	Sun Microsystems	HPC 4500 400 MHz Cluster	Industry	United States	2000	420.44	896	716.80	144000	43200	N/A
114	Service Provider	Sun Microsystems	HPC 4500 400 MHz Cluster	Industry	United States	2000	420.44	896	716.80	144000	43200	N/A
115	Sun	Sun Microsystems	HPC 4500 400 MHz Cluster	Vendor	United States	2000	420.44	896	716.80	144000	43200	N/A
116	NASA/Ames Research Center/NAS	SGI	ORIGIN 3000 600 MHz	Research	United States	2002	405.60	1024	1228.80			NUMAflex
117	NOAA/Geophysical Fluid Dynamics Laboratory (GFDL)	SGI	ORIGIN 3000 600 MHz	Research	United States	2001	405.60	896	1075.00			NUMAflex
118	Norwegian University of Science and Technology	SGI	ORIGIN 3000 600 MHz	Academic	Norway	2002	405.60	512	614.40			NUMAflex
119	Fleet Numerical Meteorology and Oceanography Center	SGI	ORIGIN 3000 500 MHz	Research	United States	2001	405.60	512	512.00	230000		NUMAflex
120	Government	SGI	ORIGIN 3000 500 MHz	Classified	United States	2002	405.60	512	512.00	230000		NUMAflex
121	Japan Atomic Energy Research Institute	SGI	ORIGIN 3000 500 MHz	Research	Japan	2001	405.60	512	512.00	230000		NUMAflex
122	Kyoto University, Institute for Chemical Research	SGI	ORIGIN 3000 500 MHz	Academic	Japan	2002	405.60	512	512.00	230000		NUMAflex
123	SARA (Stichting Academisch Rekencentrum)	SGI	ORIGIN 3000 500 MHz	Academic	Netherlands	2000	405.60	512	512.00	230000		NUMAflex
124	SARA (Stichting Academisch Rekencentrum)	SGI	ORIGIN 3000 500 MHz	Academic	Netherlands	2000	405.60	512	512.00	230000		NUMAflex
125	Center for Computational Physics, Univ of Tsukuba	Hitachi/Tsukuba	CP-PACS/2048	Academic	Japan	1996	368.20	2048	614.40	103680	30720	Crossbar
126	Geoscience (C)	IBM	Netfinity Cluster PIII 1.4 GHz - Eth	Industry	United Kingdom	2002	366.00	1280	1792.00			Ethernet
127	Mississippi State University	IBM	Netfinity Cluster PIII 1/1.26 GHz - Eth	Academic	United States	2002	366.00	1024	1144.00			Ethernet
128	Centrica Plc	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United Kingdom	2002	361.40	192	576.00			Myrinet
129	Hewlett-Packard	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Vendor	United States	2002	361.40	192	576.00			Myrinet

Rank	Site	Manufacturer	Computer	Inst. type	Country	Year	Rmax	Processors	Rpeak	Nmax	Nhalf	Interconnect
130	Universitaet Aachen/RWTH	Sun Microsystems	Fire 15K	Academic	Germany	2002	357.10	288	518.40			Fireplane
131	Max-Planck-Gesellschaft MPI/IPP	Cray Inc.	T3E	Research	Germany	1997	355.00	812	487.20			Cray Interconnect
132	ERDC MSRC	Hewlett-Packard	AlphaServer SC40, 833 MHz	Research	United States	2001	344.10	256	426.50	142000	17000	Quadrics
133	Japan Marine Science and Technology	Hewlett-Packard	AlphaServer SC40, 833 MHz	Research	Japan	2001	344.10	256	426.50	142000	17000	Quadrics
134	Los Alamos National Laboratory	Hewlett-Packard	AlphaServer SC40, 833 MHz	Research	United States	2001	344.10	256	426.50	142000	17000	Quadrics
135	HWW/Universitaet Stuttgart	Cray Inc.	T3E900	Industry	Germany	1996	341.00	540	486.00			Cray Interconnect
136	Pittsburgh Supercomputing Center	Cray Inc.	T3E900	Academic	United States	1998	341.00	540	486.00			Cray Interconnect
137	ZIB/Konrad Zuse-Zentrum fuer Informationstechnik	Cray Inc.	T3E900	Academic	Germany	1999	341.00	540	486.00			Cray Interconnect
138	University of Minnesota/Supercomputing Institute	IBM	SP Power3 375 MHz	Academic	United States	2000	330.00	322	483.00			SP Switch
139	Maui High-Performance Computing Center (MHPCC)	IBM	SP Power3 375 MHz	Research	United States	2000	327.00	320	480.00			SP Switch
140	Commissariat a l'Energie Atomique (CEA)	Hewlett-Packard	AlphaServer SC40, 833 MHz	Research	France	2000	326.40	300	499.80	110000	38000	Quadrics
141	Petroleum Company (G)	IBM	Netfinity Cluster PIII 1.13 GHz - Eth	Industry	Saudia Arabia	2001	326.00	2048	2314.00			Ethernet
142	WesternGeco	IBM	Netfinity Cluster PIII 1.13 GHz - Eth	Industry	United States	2002	326.00	1040	1175.00			Ethernet
143	Compagnie Generale de Geophysique (CGG)	IBM	Netfinity Cluster PIII 1.13 GHz - Eth	Industry	United Kingdom	2002	326.00	1024	1157.00			Ethernet
144	Compagnie Generale de Geophysique (CGG)	IBM	Netfinity Cluster PIII 1.13 GHz - Eth	Industry	United Kingdom	2002	326.00	1024	1157.00			Ethernet
145	Geoscience (C)	IBM	Netfinity Cluster PIII 1.13 GHz - Eth	Industry	Egypt	2001	326.00	1024	1157.00			Ethernet
146	Institute of Physical and Chemical Res. (RIKEN)	Fujitsu	VPP700/160E	Research	Japan	1999	319.00	160	384.00	168000	24000	Crossbar
147	CSAR at the University of Manchester	SGI	ORIGIN 3000 400 MHz	Academic	United Kingdom	2001	315.50	512	409.60	130560	108800	Crossbar
148	ERDC MSRC	SGI	ORIGIN 3000 400 MHz	Research	United States	2001	315.50	512	409.60	130560	108800	Crossbar
149	Manufacturing Company	SGI	ORIGIN 3000 400 MHz	Industry	Sweden	2002	315.50	512	409.60	130560	108800	Crossbar
150	NASA/Ames Research Center/NAS	SGI	ORIGIN 3000 400 MHz	Research	United States	2001	315.50	512	409.60	130560	108800	Crossbar
151	NASA/Goddard Space Flight Center	SGI	ORIGIN 3000 400 MHz	Research	United States	2001	315.50	512	409.60	130560	108800	Crossbar
152	Silicon Graphics	SGI	ORIGIN 3000 400 MHz	Vendor	United States	2001	315.50	512	409.60	130560	108800	Crossbar
153	US Army Research Laboratory (ARL)	SGI	ORIGIN 3000 400 MHz	Research	United States	2000	315.50	512	409.60	130560	108800	Crossbar
154	I2 Technologies Inc.	IBM	pSeries 690 1.1GHz GigEth	Industry	United States	2002	315.00	160	704.00			Gigabit Ethernet
155	Communications Res. Lab. (CRL)	NEC	SX-6/40M5	Research	Japan	2002	311.70	40	320.00	102400	4480	Crossbar
156	ERDC MSRC	IBM	SP Power3 222 MHz	Research	United States	2000	307.60	512	454.60	148000	35000	SP Switch
157	Government	IBM	pSeries 690 Turbo 1.3GHz GigEth	Classified	United States	2002	306.40	128	665.60	112000		Gigabit Ethernet
158	KISTI Supercomputing Center	IBM	pSeries 690 Turbo 1.3GHz GigEth	Research	Korea, South	2002	306.40	128	665.60	112000		Gigabit Ethernet
159	Logicon	IBM	pSeries 690 Turbo 1.3GHz GigEth	Industry	United States	2002	306.40	128	665.60	112000		Gigabit Ethernet
160	NRI for Earth Science and Disaster (NIED)	SGI	ORIGIN 3000 500 MHz	Research	Japan	2002	306.30	384	384.00			NUMAflex
161	Norwegian University of Science and Technology	SGI	ORIGIN 3000 500 MHz	Academic	Norway	2001	306.30	384	384.00			NUMAflex
162	CNRS/IDRIS	NEC	SX-5/40M3	Academic	France	2000	303.00	40	320.00			Crossbar
163	University of California - Santa Cruz	Verari Systems	RS1100 AMD 1.4 GHz - Dolphin	Academic	United States	2002	301.80	264	739.20	115000	15000	Myrinet
164	EDINFOR	IBM	SP Power3 375 MHz	Industry	Portugal	2001	301.00	296	444.00			SP Switch
165	NASA/Ames Research Center/NAS	SGI	ORIGIN 2000 400 MHz	Research	United States	2000	300.20	512	409.60	130560	21216	Crossbar
166	Agilent	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2001	296.20	144	432.00			Myrinet
167	Central Research Institute of Electric Power Industry/CRIEPI	Fujitsu	VPP5000/32	Research	Japan	2000	296.10	32	307.20	170880	7680	Crossbar
168	PGS	IBM	SP Power3 375 MHz	Industry	United States	2001	295.00	290	435.00			SP Switch
169	Geoscience (C)	IBM	Netfinity Cluster PIII 1 GHz - Eth	Industry	United Kingdom	2001	289.00	1040	1040.00			Ethernet
170	WesternGeco	IBM	Netfinity Cluster PIII 1 GHz - Eth	Industry	United States	2002	289.00	1040	1040.00			Ethernet
171	Compagnie Generale de Geophysique (CGG)	IBM	Netfinity Cluster PIII 1 GHz - Eth	Industry	United Kingdom	2001	289.00	1024	1024.00			Ethernet
172	Shell	IBM	Netfinity Cluster PIII 1 GHz - Eth	Industry	Netherlands	2001	289.00	1024	1024.00			Ethernet

Rank	Site	Manufacturer	Computer	Inst. type	Country	Year	Rmax	Processors	Rpeak	Nmax	Nhalf	Interconnect
173	US Army Space and Missile Defense Command	IBM	SP Power3 375 MHz	Research	United States	2000	288.00	284	426.00			SP Switch
174	Meteo-France	Fujitsu	VPP5000/31	Research	France	1999	286.00	31	297.60			Crossbar
175	Nanyang Technological University - BIRC	Hewlett-Packard	AlphaServer SC45, 1 GHz	Academic	Singapore	2002	285.30	176	352.00	124000	14000	Quadrics
176	Maui High-Performance Computing Center (MHPCC)	IBM	Netfinity Cluster PIII 933 MHz - Myrinet	Research	United States	2001	285.00	520	485.16			Myrinet
177	CSC (Center for Scientific Computing)	Cray Inc.	T3E750	Academic	Finland	2000	284.00	540	405.00			Cray Interconnect
178	Institute for Molecular Science	Fujitsu	VPP5000/30	Research	Japan	2000	277.00	30	288.00			Crossbar
179	Geoscience (C)	IBM	Netfinity Cluster PIII 933 MHz - Eth	Industry	Egypt	2002	269.00	1024	955.30			Ethernet
180	NCSA	SGI	ORIGIN 2000 195/250 MHz	Academic	United States	1998	264.90	1024	327.68			Crossbar
181	Oak Ridge National Laboratory	Hewlett-Packard	AlphaServer SC ES40/EV67	Research	United States	2000	263.60	256	341.33	106000	20000	Quadrics
182	Pittsburgh Supercomputing Center	Hewlett-Packard	AlphaServer SC ES40/EV67	Academic	United States	2000	263.60	256	341.33	106000	20000	Quadrics
183	DeTeCSM	IBM	SP Power3 375 MHz	Industry	Germany	2001	262.00	260	390.00			SP Switch
184	Hewlett-Packard	Hewlett-Packard	rp8400 750 MHz/HyperFabric	Vendor	United States	2002	261.10	128	384.00			Myrinet
185	Centre Informatique National (CINES)	SGI	ORIGIN 3000 500 MHz	Academic	France	2001	259.00	320	320.00			NUMAflex
186	Purdue University	IBM	SP Power3 375 MHz	Academic	United States	2000	257.00	256	384.00	148000	24000	SP Switch
187	Meteorological Research Institute/JMA	Hitachi	SR8000/36	Research	Japan	1999	255.00	36	288.00	69000	5968	Crossbar
188	Hewlett-Packard	Hewlett-Packard	SuperDome 750 MHz/HyperFabric	Vendor	United States	2002	254.90	128	384.00			Myrinet
189	BMW AG	Hewlett-Packard	rp8400 750 MHz/HyperPlex	Industry	Germany	2001	251.10	128	384.00	234144	70092	Myrinet
190	Chemical Company	IBM	SP PC604e 332 MHz	Industry	Germany	2000	250.00	716	475.40			SP Switch
191	BMW AG	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Germany	2002	245.30	128	384.00	170100	55080	Myrinet
192	Beijing Social Insurance	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	China	2001	245.30	128	384.00	170100	55080	Myrinet
193	EDS	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United Kingdom	2001	245.30	128	384.00	170100	55080	Myrinet
194	France Telecom	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	France	2001	245.30	128	384.00	170100	55080	Myrinet
195	Netsiel S.P.A.	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Italy	2002	245.30	128	384.00	170100	55080	Myrinet
196	Omnitel Pronto Italia	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Italy	2002	245.30	128	384.00	170100	55080	Myrinet
197	debis Systemhaus	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Germany	2001	245.30	128	384.00	170100	55080	Myrinet
198	ABN AMRO	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United Kingdom	2002	245.10	128	384.00	220968	43092	Myrinet
199	BMW AG	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Germany	2002	245.10	128	384.00	220968	43092	Myrinet
200	BMW AG	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Germany	2002	245.10	128	384.00	220968	43092	Myrinet
201	BMW AG	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Germany	2002	245.10	128	384.00	220968	43092	Myrinet
202	BMW AG	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Germany	2002	245.10	128	384.00	220968	43092	Myrinet
203	BMW AG	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Germany	2002	245.10	128	384.00	220968	43092	Myrinet
204	BMW AG	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Germany	2002	245.10	128	384.00	220968	43092	Myrinet
205	Banca Sella	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Italy	2002	245.10	128	384.00	220968	43092	Myrinet
206	Centrica Plc	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United Kingdom	2002	245.10	128	384.00	220968	43092	Myrinet
207	Centrica Plc	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United Kingdom	2002	245.10	128	384.00	220968	43092	Myrinet
208	EDS	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United Kingdom	2002	245.10	128	384.00	220968	43092	Myrinet
209	Hutchison H3G	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United Kingdom	2002	245.10	128	384.00	220968	43092	Myrinet
210	IS Informationssysteme II	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Germany	2002	245.10	128	384.00	220968	43092	Myrinet
211	Itellium Systems	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Germany	2001	245.10	128	384.00	220968	43092	Myrinet
212	Magirus International	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Germany	2002	245.10	128	384.00	220968	43092	Myrinet
213	Sprint PCS	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	245.10	128	384.00	220968	43092	Myrinet
214	Verizon	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	245.10	128	384.00	220968	43092	Myrinet
215	WIND Telecom S.P.A.	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Italy	2002	245.10	128	384.00	220968	43092	Myrinet

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216	Wachovia Corporation	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	245.10	128	384.00	220968	43092	Myrinet
217	Wachovia Corporation	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	245.10	128	384.00	220968	43092	Myrinet
218	PGS	IBM	Netfinity Cluster PIII 1.13 GHz - Eth	Industry	United States	2002	245.00	768	867.80			Ethernet
219	Tohoku University	NEC	SX-4/128H4	Academic	Japan	1997	244.00	128	256.00			Crossbar
220	CIE Gegetel SI	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	France	2002	243.80	128	384.00			Myrinet
221	Manufacturing Company	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	243.80	128	384.00			Myrinet
222	Telecom Italia	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Italy	2001	243.80	128	384.00			Myrinet
223	Tohoku University, Institute of Fluid Science	SGI	ORIGIN 2000 300 MHz	Academic	Japan	2000	241.40	640	384.00	147456	33984	Crossbar
224	NASA/Ames Research Center/NAS	SGI	ORIGIN 2000 300 MHz	Research	United States	1999	241.40	512	307.20	147456	33984	Crossbar
225	Bureau of Meteorology / CSIRO HPCCC	NEC	SX-5/32M2	Research	Australia	2000	241.40	32	256.00	55296		Crossbar
226	Meteorological Service of Canada (MSC)	NEC	SX-5/32M2	Research	Canada	1999	241.40	32	256.00	55296		Crossbar
227	National Research Institute for Metals	NEC	SX-5/32H2	Research	Japan	2000	241.40	32	256.00	55296		Crossbar
228	University of New Mexico	IBM	LosLobos	Academic	United States	2000	237.00	512	375.30	150000	20000	Fast Ethernet
229	Government	Cray Inc.	T3E1200	Classified	United States	1999	235.00	284	340.80			Cray Interconnect
230	BOUYGTELE	IBM	pSeries 690 Turbo 1.3GHz GigEth	Industry	France	2002	234.00	96	499.20			Gigabit Ethernet
231	Boston University	IBM	pSeries 690 Turbo 1.3GHz GigEth	Academic	United States	2002	234.00	96	499.20			Gigabit Ethernet
232	Hitachi Micro Systems	IBM	pSeries 690 Turbo 1.3GHz GigEth	Industry	United States	2002	234.00	96	499.20			Gigabit Ethernet
233	Universitaet Darmstadt	IBM	pSeries 690 Turbo 1.3GHz GigEth	Academic	Germany	2002	234.00	96	499.20			Gigabit Ethernet
234	University of Bergen	IBM	pSeries 690 Turbo 1.3GHz GigEth	Academic	Norway	2002	234.00	96	499.20			Gigabit Ethernet
235	Cray Inc.	Cray Inc.	T3E	Vendor	United States	1997	234.00	540	324.00	86400	14400	Cray Interconnect
236	Forschungszentrum Juelich (FZJ)	Cray Inc.	T3E	Research	Germany	1996	234.00	540	324.00	86400	14400	Cray Interconnect
237	SARA (Stichting Academisch Rekencentrum)	IBM	Netfinity Cluster PIII 1 GHz - Myrinet	Academic	Netherlands	2002	232.00	400	400.00			Myrinet
238	Taiwan Central Weather Bureau & CAA	Fujitsu	VPP5000/25	Research	Taiwan	2001	232.00	25	240.00			Crossbar
239	General Motors	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	231.60	120	360.00			Myrinet
240	National Aerospace Laboratory of Japan	Fujitsu	Numerical Wind Tunnel	Research	Japan	1996	229.00	167	281.26	66132	18018	Crossbar
241	Hokkaido University	Hitachi	SR8000/32	Academic	Japan	2000	229.00	32	256.00	65000	5632	Crossbar
242	Ohio Supercomputer Center	SGI	SGI 750 Cluster Itanium 733 MHz	Academic	United States	2001	226.00	128	375.29	157680		Fast Ethernet
243	Gesellschaft fuer wissenschaftliche Datenverarbeitung	IBM	SP Power3 375 MHz	Academic	Germany	2001	226.00	224	336.00			SP Switch
244	Manufacturing Company	IBM	SP Power3 375 MHz	Industry	United States	2001	226.00	224	336.00			SP Switch
245	Petroleum Company (G)	IBM	SP Power3 375 MHz 16 way	Industry	Saudia Arabia	2001	226.00	208	312.00			SP Switch
246	Technische Universitaet Chemnitz	Self-made	CLIC PIII 800 MHz	Academic	Germany	2000	221.60	530	424.00	176640	28272	Fast Ethernet
247	Sandia National Laboratories	IBM	Netfinity Cluster PIII 733 MHz - Myrinet	Research	United States	2002	220.00	512	375.30			Myrinet
248	University of Edinburgh	Cray Inc.	T3E900	Academic	United Kingdom	1997	218.00	348	313.20			Cray Interconnect
249	PSA Peugeot Citroen	IBM	SP Power3 375 MHz	Industry	France	2001	214.00	212	318.00			SP Switch
250	ECMWF	Fujitsu	VPP700/116	Research	United Kingdom	1997	213.00	116	255.20	111360	18560	Crossbar
251	Chemical Company	IBM	SP Power3 375 MHz	Industry	Germany	2000	212.00	210	315.00			SP Switch
252	Korea Meteorological Administration	NEC	SX-5/28M2	Research	Korea, South	2000	212.00	28	224.00			Crossbar
253	Commissariat a l'Energie Atomique (CEA)	Hewlett-Packard	AlphaServer SC ES40/EV67	Research	France	1999	211.00	232	309.33	120000		Quadrics
254	Sobeys Canada	IBM	SP PC604e 332 MHz	Industry	Canada	2000	210.20	512	339.90	100000	20872	SP Switch
255	NOAA/Geophysical Fluid Dynamics Laboratory (GFDL)	SGI	ORIGIN 3000 600 MHz	Research	United States	2001	210.20	256	307.20			NUMAflex
256	NOAA/Geophysical Fluid Dynamics Laboratory (GFDL)	SGI	ORIGIN 3000 600 MHz	Research	United States	2001	210.20	256	307.20			NUMAflex
257	Government	SGI	ORIGIN 3000 500 MHz	Classified	United States	2002	210.20	256	256.00	163000		NUMAflex
258	Japan Atomic Energy Research Institute	SGI	ORIGIN 3000 500 MHz	Research	Japan	2001	210.20	256	256.00	163000		NUMAflex

Rank	Site	Manufacturer	Computer	Inst. type	Country	Year	Rmax	Processors	Rpeak	Nmax	Nhalf	Interconnect
259	Kyoto University, Institute for Chemical Research	SGI	ORIGIN 3000 500 MHz	Academic	Japan	2002	210.20	256	256.00	163000		NUMAflex
260	Manufacturing Company	SGI	ORIGIN 3000 500 MHz	Industry	United States	2002	210.20	256	256.00	163000		NUMAflex
261	CINECA	Hewlett-Packard	AlphaServer SC45, 1 GHz	Academic	Italy	2002	207.00	128	256.00			Quadrics
262	Japan Atomic Energy Research/Tokai Research Establishment	Hitachi	SR8000-F1/20	Research	Japan	2001	206.00	20	240.00	68000	4440	Crossbar
263	Universitaet Wien	init.at	Schroedinger 1 AMD 1.47 GHz	Academic	Austria	2001	204.50	160	472.00	138700	44000	Fast Ethernet
264	University of Alaska - ARSC	IBM	SP Power3 375 MHz	Academic	United States	2001	203.00	200	300.00			SP Switch
265	Hitachi Mechanical Engineering Res. Lab.	Hitachi	SR8000-G1/16	Industry	Japan	2001	199.10	16	230.40	64000	3440	Crossbar
266	Gesellschaft fuer wissenschaftliche Datenverarbeitung	IBM	pSeries 690 1.1GHz GigEth	Academic	Germany	2002	198.00	96	422.40			Gigabit Ethernet
267	HeiLongJiang Mobile BOSS	IBM	pSeries 690 1.1GHz GigEth	Industry	China	2002	198.00	96	422.40			Gigabit Ethernet
268	Verizon	IBM	pSeries 690 1.1GHz GigEth	Industry	United States	2002	198.00	96	422.40			Gigabit Ethernet
269	University of Rochester	IBM	pSeries 690 Turbo 1.3GHz GigEth	Academic	United States	2002	198.00	80	416.00			Gigabit Ethernet
270	Automotive Manufacturer	Sun Microsystems	Fire 15K	Industry	France	2002	197.30	144	259.20			Fireplane
271	Automotive Manufacturer	Sun Microsystems	Fire 15K	Industry	France	2002	197.30	144	259.20			Fireplane
272	BMW AG	Sun Microsystems	Fire 15K	Industry	Germany	2002	197.30	144	259.20			Fireplane
273	DaimlerChrysler	Sun Microsystems	Fire 15K	Industry	Germany	2002	197.30	144	259.20			Fireplane
274	DaimlerChrysler	Sun Microsystems	Fire 15K	Industry	Germany	2002	197.30	144	259.20			Fireplane
275	DaimlerChrysler	Sun Microsystems	Fire 15K	Industry	Germany	2002	197.30	144	259.20			Fireplane
276	Government	Sun Microsystems	Fire 15K	Classified	United States	2002	197.30	144	259.20			Fireplane
277	Kyoto University	Sun Microsystems	Fire 15K	Academic	Japan	2002	197.30	144	259.20			Fireplane
278	Agricultural Bank of China (ABC) Shandong	Hewlett-Packard	SuperDome/HyperPlex	Industry	China	2001	196.70	128	281.60			Myrinet
279	Amdocs	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	196.70	128	281.60			Myrinet
280	Amdocs	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	196.70	128	281.60			Myrinet
281	Bell Canada	Hewlett-Packard	SuperDome/HyperPlex	Industry	Canada	2001	196.70	128	281.60			Myrinet
282	Bell Canada	Hewlett-Packard	SuperDome/HyperPlex	Industry	Canada	2001	196.70	128	281.60			Myrinet
283	Brasil Telecom	Hewlett-Packard	SuperDome/HyperPlex	Industry	Brazil	2001	196.70	128	281.60			Myrinet
284	Braun GmbH	Hewlett-Packard	SuperDome/HyperPlex	Industry	Germany	2001	196.70	128	281.60			Myrinet
285	Government	Hewlett-Packard	SuperDome/HyperPlex	Classified	United States	2001	196.70	128	281.60			Myrinet
286	Government	Hewlett-Packard	SuperDome/HyperPlex	Classified	United States	2001	196.70	128	281.60			Myrinet
287	Government	Hewlett-Packard	SuperDome/HyperPlex	Classified	United States	2001	196.70	128	281.60			Myrinet
288	Government	Hewlett-Packard	SuperDome/HyperPlex	Classified	United States	2001	196.70	128	281.60			Myrinet
289	NewSky	Hewlett-Packard	SuperDome/HyperPlex	Industry	Korea, South	2001	196.70	128	281.60			Myrinet
290	One2One	Hewlett-Packard	SuperDome/HyperPlex	Industry	United Kingdom	2001	196.70	128	281.60			Myrinet
291	OverWrite	Hewlett-Packard	SuperDome/HyperPlex	Industry	United Kingdom	2001	196.70	128	281.60			Myrinet
292	Oy Saimaa Lines LTD	Hewlett-Packard	SuperDome/HyperPlex	Industry	Finland	2001	196.70	128	281.60			Myrinet
293	POSDATA	Hewlett-Packard	SuperDome/HyperPlex	Industry	Korea, South	2001	196.70	128	281.60			Myrinet
294	POSDATA	Hewlett-Packard	SuperDome/HyperPlex	Industry	Korea, South	2001	196.70	128	281.60			Myrinet
295	Q Application Varwest	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	196.70	128	281.60			Myrinet
296	Qwest	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	196.70	128	281.60			Myrinet
297	Telecommunications Equipment	Hewlett-Packard	SuperDome/HyperPlex	Industry	Finland	2001	196.70	128	281.60			Myrinet
298	Telkom LTD	Hewlett-Packard	SuperDome/HyperPlex	Industry	United Kingdom	2001	196.70	128	281.60			Myrinet
299	Telkom SA	Hewlett-Packard	SuperDome/HyperPlex	Industry	South Africa	2001	196.70	128	281.60			Myrinet
300	Titan Secure	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	196.70	128	281.60			Myrinet
301	US Navy	Hewlett-Packard	SuperDome/HyperPlex	Classified	United States	2001	196.70	128	281.60			Myrinet

Rank	Site	Manufacturer	Computer	Inst. type	Country	Year	Rmax	Processors	Rpeak	Nmax	Nhalf	Interconnect
302	Verizon	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	196.70	128	281.60			Myrinet
303	Vodafone	Hewlett-Packard	SuperDome/HyperPlex	Industry	United Kingdom	2001	196.70	128	281.60			Myrinet
304	Wirth Adolf GmbH	Hewlett-Packard	SuperDome/HyperPlex	Industry	Germany	2001	196.70	128	281.60			Myrinet
305	Amazon	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	196.20	128	281.60			Myrinet
306	Government	Hewlett-Packard	SuperDome/HyperPlex	Classified	Germany	2001	196.20	128	281.60			Myrinet
307	Kone	Hewlett-Packard	SuperDome/HyperPlex	Industry	Belgium	2001	196.20	128	281.60			Myrinet
308	High Performance Computing Virtual Laboratory	Sun Microsystems	Fire 6800/Sun Fire Link	Research	Canada	2002	195.80	192	345.60			N/A
309	Brasil Telecom	Hewlett-Packard	SuperDome/HyperPlex	Industry	Brazil	2001	195.80	128	281.60			Myrinet
310	Cisco	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	195.80	128	281.60			Myrinet
311	Cisco	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	195.80	128	281.60			Myrinet
312	France Telecom	Hewlett-Packard	SuperDome/HyperPlex	Industry	France	2001	195.80	128	281.60			Myrinet
313	Government	Hewlett-Packard	SuperDome/HyperPlex	Classified	United Kingdom	2001	195.80	128	281.60			Myrinet
314	Government	Hewlett-Packard	SuperDome/HyperPlex	Classified	United Kingdom	2001	195.80	128	281.60			Myrinet
315	Government	Hewlett-Packard	SuperDome/HyperPlex	Classified	United Kingdom	2001	195.80	128	281.60			Myrinet
316	Government	Hewlett-Packard	SuperDome/HyperPlex	Classified	United Kingdom	2001	195.80	128	281.60			Myrinet
317	LG-EDS Systems	Hewlett-Packard	SuperDome/HyperPlex	Industry	Korea, South	2001	195.80	128	281.60			Myrinet
318	Omnitel Pronto Italia	Hewlett-Packard	SuperDome/HyperPlex	Industry	Italy	2001	195.80	128	281.60			Myrinet
319	Raytheon	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	195.80	128	281.60			Myrinet
320	Supreme Court of Korea	Hewlett-Packard	SuperDome/HyperPlex	Government	Korea, South	2001	195.80	128	281.60			Myrinet
321	Paine Webber	IBM	SP Power3 375 MHz	Industry	United States	2001	195.00	192	288.00			SP Switch
322	AT&T Wireless	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2001	194.80	96	288.00	175932	33048	Myrinet
323	Amdocs	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	194.80	96	288.00	175932	33048	Myrinet
324	American Express	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	194.80	96	288.00	175932	33048	Myrinet
325	Aventis Pharma GmbH	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Germany	2002	194.80	96	288.00	175932	33048	Myrinet
326	BellSouth	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	194.80	96	288.00	175932	33048	Myrinet
327	Corporacion Digital CA	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Venezuela	2001	194.80	96	288.00	175932	33048	Myrinet
328	DaimlerChrysler	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	194.80	96	288.00	175932	33048	Myrinet
329	General Electric Appliances	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	194.80	96	288.00	175932	33048	Myrinet
330	HI3G ACCESS AB	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Sweden	2002	194.80	96	288.00	175932	33048	Myrinet
331	IntesaBci Sistemi	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Italy	2002	194.80	96	288.00	175932	33048	Myrinet
332	Netsiel S.P.A.	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Italy	2002	194.80	96	288.00	175932	33048	Myrinet
333	Starbucks	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2001	194.80	96	288.00	175932	33048	Myrinet
334	Telecom Italia	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Italy	2001	194.80	96	288.00	175932	33048	Myrinet
335	America On Line (AOL)	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	191.70	96	288.00			Myrinet
336	America On Line (AOL)	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	191.70	96	288.00			Myrinet
337	Belgacom	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Belgium	2002	191.70	96	288.00			Myrinet
338	Belgacom	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Belgium	2002	191.70	96	288.00			Myrinet
339	Bell Canada	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Canada	2001	191.70	96	288.00			Myrinet
340	Citibank	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	191.70	96	288.00			Myrinet
341	France Telecom	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	France	2001	191.70	96	288.00			Myrinet
342	France Telecom	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	France	2001	191.70	96	288.00			Myrinet
343	Omnitel Vodafone	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	Italy	2002	191.70	96	288.00			Myrinet
344	Sprint PCS	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	191.70	96	288.00			Myrinet

Rank	Site	Manufacturer	Computer	Inst. type	Country	Year	Rmax	Processors	Rpeak	Nmax	Nhalf	Interconnect
345	Sprint PCS	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	191.70	96	288.00			Myrinet
346	Sprint PCS	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	191.70	96	288.00			Myrinet
347	Transco PLC	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United Kingdom	2002	191.70	96	288.00			Myrinet
348	Transco PLC	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United Kingdom	2002	191.70	96	288.00			Myrinet
349	Transco PLC	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United Kingdom	2002	191.70	96	288.00			Myrinet
350	Transco PLC	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United Kingdom	2002	191.70	96	288.00			Myrinet
351	Transco PLC	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United Kingdom	2002	191.70	96	288.00			Myrinet
352	Verizon	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	191.70	96	288.00			Myrinet
353	US Army Research Laboratory (ARL)	IBM	pSeries 690 Turbo 1.3GHz	Research	United States	2002	191.40	64	332.80	148000	11000	SP Switch
354	PIK	IBM	SP Power3 375 MHz 4/16 way	Research	Germany	2000	190.20	200	300.00			SP Switch
355	American Airlines	Hewlett-Packard	V2500/HyperPlex	Industry	United States	1999	189.30	320	563.20			Myrinet
356	Government	IBM	Netfinity Cluster PIII 1 GHz - Eth	Classified	Canada	2002	188.00	668	668.00			Ethernet
357	Universitaet Aachen/RWTH	Sun Microsystems	Fire 6800	Academic	Germany	2002	186.50	192	345.60			N/A
358	Universitaet Aachen/RWTH	Sun Microsystems	Fire 6800	Academic	Germany	2002	186.50	192	345.60			N/A
359	Verisign	IBM	Netfinity Cluster PIII 1.2 GHz - Eth	Industry	United States	2002	186.00	550	660.00			Ethernet
360	SHARCNET - University of Western Ontario	Hewlett-Packard	Greatwhite ES40 833 MHz Quadrics	Academic	Canada	2001	185.30	144	239.90	128000		Quadrics
361	POSDATA	Self-made	Netfinity Cluster PIII 1 GHz - Myrinet	Industry	Korea, South	2001	184.40	320	320.00	120000	15000	Myrinet
362	PGS	IBM	Netfinity Cluster PIII 1.26 GHz - Eth	Industry	Egypt	2002	183.00	512	645.10			Ethernet
363	PGS	IBM	Netfinity Cluster PIII 1.26 GHz - Eth	Industry	United States	2002	183.00	512	645.10			Ethernet
364	Commerzbank	IBM	pSeries 690 1.1GHz GigEth	Industry	Germany	2002	183.00	88	387.20			Gigabit Ethernet
365	NEC Fuchu Plant	NEC	SX-5/24M2	Vendor	Japan	2001	183.00	24	192.00			Crossbar
366	Brookhaven National Laboratory	IBM	Netfinity Cluster PIII 1 GHz - Eth	Research	United States	2002	182.40	632	632.00			Ethernet
367	Syrxx	IBM	Netfinity Cluster PIII 1 GHz - Eth	Industry	United States	2002	182.40	500	500.00			Ethernet
368	Amgen Inc.	IBM	Netfinity Cluster PIII 1 GHz - Eth	Industry	United States	2002	182.40	432	432.00			Ethernet
369	DKFZ	Hewlett-Packard	SuperDome 750/500 MHz/HyperPlex	Research	Germany	2001	181.20	96	262.60			Myrinet
370	Air Force Weather Agency	IBM	SP PC604e 332 MHz	Research	United States	1999	181.00	440	292.10			SP Switch
371	Pacific Northwest National Laboratory	IBM	SP P2SC 120/135 MHz	Research	United States	1998	180.91	512	248.32	62000		SP Switch
372	CNRS/IDRIS	IBM	SP Power3 375 MHz	Academic	France	2001	179.00	176	264.00			SP Switch
373	Commissariat a l'Energie Atomique (CEA)	Hewlett-Packard	AlphaServer SC40, 833 MHz	Research	France	2000	178.00	160	266.50	71000	20000	Quadrics
374	Virginia Tech	IBM	Netfinity Cluster PIII 1 GHz - Eth	Academic	United States	2002	177.00	408	408.00			Ethernet
375	Bank of America	IBM	SP Power3 375 MHz	Industry	United States	2001	177.00	174	261.00			SP Switch
376	Cambridge University	IBM	SP Power3 375 MHz	Academic	United Kingdom	2001	171.00	168	252.00			SP Switch
377	DeTeCSM	IBM	SP Power3 375 MHz	Industry	Germany	2001	171.00	168	252.00			SP Switch
378	Florida State University	IBM	SP Power3 375 MHz	Academic	United States	2000	171.00	168	252.00			SP Switch
379	National Center for High Performance Computing	IBM	SP Power3 375 MHz	Academic	Taiwan	2000	171.00	168	252.00			SP Switch
380	WesternGeco	IBM	Netfinity Cluster PIII 933 MHz - Eth	Industry	United States	2002	170.00	512	477.60			Ethernet
381	Compagnie Generale de Geophysique (CGG)	Dell	PowerEdge Cluster PIII 1 GHz - Fast Eth	Industry	United States	2001	169.40	512	512.00			Fast Ethernet
382	Network Computing Services, Inc.	Cray Inc.	T3E900	Industry	United States	1997	169.00	268	241.20			Cray Interconnect
383	University of Alaska - ARSC	Cray Inc.	T3E900	Academic	United States	1999	169.00	268	241.20			Cray Interconnect
384	Metro MGI Informatik	IBM	SP S80s 450 MHz	Industry	Germany	2000	167.80	510	459.00	113000	31000	N/A
385	Bank	IBM	pSeries 690 1.1GHz GigEth	Industry	United Kingdom	2002	167.00	80	352.00			Gigabit Ethernet
386	McKesson	IBM	pSeries 690 1.1GHz GigEth	Industry	United States	2002	167.00	80	352.00			Gigabit Ethernet
387	ABN AMRO	IBM	SP Power3 375 MHz	Industry	Netherlands	2001	167.00	164	246.00			SP Switch

Rank	Site	Manufacturer	Computer	Inst. type	Country	Year	Rmax	Processors	Rpeak	Nmax	Nhalf	Interconnect
388	DaimlerChrysler	IBM	SP Power3 375 MHz	Industry	Germany	2001	167.00	164	246.00			SP Switch
389	Inpharmatica	IBM	Netfinity Cluster PIII 1.13 GHz - Eth	Industry	United States	2002	165.00	381	430.50			Ethernet
390	Pharmaceutical Company	IBM	SP Power3 375 MHz	Industry	Germany	2001	165.00	162	243.00			SP Switch
391	Air Force Weather Agency	IBM	SP Power3 375 MHz	Research	United States	2000	164.00	160	240.00			SP Switch
392	Automotive Manufacturer (C)	IBM	SP Power3 375 MHz	Industry	United States	2001	164.00	160	240.00			SP Switch
393	Kroger	IBM	SP Power3 375 MHz	Industry	United States	2002	164.00	160	240.00			SP Switch
394	Philip Morris	IBM	SP Power3 375 MHz	Industry	United States	2000	164.00	160	240.00			SP Switch
395	Government	SGI	ORIGIN 3000 400 MHz	Classified	United States	2001	163.50	256	204.80	163200	81920	Crossbar
396	Silicon Graphics	SGI	ORIGIN 3000 400 MHz	Vendor	United States	2001	163.50	256	204.80	163200	81920	Crossbar
397	The Scripps Research Institute	SGI	ORIGIN 3000 400 MHz	Research	United States	2001	163.50	256	204.80	163200	81920	Crossbar
398	Bank Administration Institute (BAI)	IBM	SP PC604e 332 MHz	Industry	United States	2000	163.00	396	262.80			SP Switch
399	BCDI	IBM	SP PC604e 332 MHz	Industry	United States	2000	162.00	392	260.20			SP Switch
400	Metallurgical Industry Co.	IBM	SP PC604e 332 MHz	Industry	United States	2000	162.00	392	260.20			SP Switch
401	P&O NedLloyd	IBM	SP Power3 375 MHz	Industry	United Kingdom	2001	162.00	158	237.00			SP Switch
402	Bank of Nigeria	IBM	pSeries 690 Turbo 1.3GHz GigEth	Industry	Nigeria	2002	161.90	64	332.80	80000		Gigabit Ethernet
403	Deutsche Bank	IBM	pSeries 690 Turbo 1.3GHz GigEth	Industry	Germany	2002	161.90	64	332.80	80000		Gigabit Ethernet
404	Lawrence Livermore National Laboratory	IBM	pSeries 690 Turbo 1.3GHz GigEth	Research	United States	2002	161.90	64	332.80	80000		Gigabit Ethernet
405	Lufthansa	IBM	pSeries 690 Turbo 1.3GHz GigEth	Industry	Germany	2002	161.90	64	332.80	80000		Gigabit Ethernet
406	NASA/Ames Research Center/NAS	IBM	pSeries 690 Turbo 1.3GHz GigEth	Research	United States	2002	161.90	64	332.80	80000		Gigabit Ethernet
407	SARA/IC3A (Stichting Academisch Rekencentrum)	IBM	pSeries 690 Turbo 1.3GHz GigEth	Academic	Netherlands	2002	161.90	64	332.80	80000		Gigabit Ethernet
408	Texas Advanced Computing Center/Univ. of Texas	IBM	pSeries 690 Turbo 1.3GHz GigEth	Academic	United States	2002	161.90	64	332.80	80000		Gigabit Ethernet
409	Instituto Mexicano del Petroleo	Self-made	LUFAC Intel Cluster 1.13 GHz	Industry	Mexico	2002	160.90	252	284.70	120000		Fast Ethernet
410	Valencia Community College	Dell	Dell P4 Cluster 1.7 GHz - Ethernet	Academic	United States	2002	160.60	145	493.00			Ethernet
411	Honda Research and Development Company	Self-made	Pentium 4 Cluster 2.0/1.7 GHz - Giganet	Industry	Japan	2002	160.40	98	388.00	75500	24000	Giganet
412	Support Net Inc	IBM	SP Power3 375 MHz	Industry	United States	2000	160.00	156	234.00			SP Switch
413	Unilever	IBM	SP Power3 375 MHz	Industry	United States	2001	160.00	156	234.00			SP Switch
414	CILEA	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Research	Italy	2001	159.70	80	240.00			Myrinet
415	Staag Imaging	Verari Systems	RS1100 AMD 1.4 GHz - Dolphin	Industry	United States	2002	158.80	128	358.40	113000		Myrinet
416	Ford Motor Company	SGI	ORIGIN 3000 500 MHz	Industry	United States	2001	158.00	192	192.00			NUMAflex
417	Manufacturing Company	SGI	ORIGIN 3000 500 MHz	Industry	United States	2002	158.00	192	192.00			NUMAflex
418	University of Minnesota/Supercomputing Institute	SGI	ORIGIN 3000 500 MHz	Academic	United States	2001	158.00	192	192.00			NUMAflex
419	Dassault Aviation	IBM	SP Power3 375 MHz	Industry	France	2001	156.00	152	228.00			SP Switch
420	Seoul National University	IBM	SP Power3 375 MHz 16 way	Academic	Korea, South	2000	156.00	144	216.00			SP Switch
421	Automatic Data Processing, Inc (ADP)	IBM	pSeries 690 1.1GHz GigEth	Industry	United States	2002	152.40	72	316.80			Gigabit Ethernet
422	GSIC Center, Tokyo Institute of Technology	SGI	ORIGIN 2000 400 MHz	Academic	Japan	2000	152.20	256	204.80	163200		Crossbar
423	Institute for Molecular Science/ Okazaki Nat. Res. Institute	SGI	ORIGIN 2000 400 MHz	Research	Japan	2000	152.20	256	204.80	163200		Crossbar
424	BASF	IBM	SP PC604e 332 MHz	Industry	Germany	2000	151.00	364	241.60			SP Switch
425	Center for Computational Physics, Univ of Tsukuba	Hitachi	SR8000-G1/12	Academic	Japan	2002	150.10	12	172.80	54000	3000	Crossbar
426	Tsukuba Advanced Computing Center - TACC/AIST	IBM	SP Power3 200 MHz	Research	Japan	1999	149.30	256	204.80	100000	18500	SP Switch
427	Tokyo University - Computer Science	Self-made	Sun Blade 1000 750MHz Cluster	Academic	Japan	2002	149.20	196	294.00	70560		N/A
428	Victorian Partnership for Advanced Computing (VPAC)	Hewlett-Packard	AlphaServer SC40, 833 MHz	Academic	Australia	2001	149.10	128	213.20	70000		Quadrics
429	Commissariat a l'Energie Atomique (CEA)	Fujitsu	VPP5000/16	Research	France	1999	149.00	16	153.60	120768	4416	Crossbar
430	Arnold Engineering Development Center (AEDC)	Hewlett-Packard	SuperDome/HyperPlex	Research	United States	2001	148.80	96	211.20			Myrinet



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431	Delta Technology	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	148.80	96	211.20			Myrinet
432	Energy Company	Hewlett-Packard	SuperDome/HyperPlex	Industry	Netherlands	2001	148.80	96	211.20			Myrinet
433	Korea Meteorological Administration	Hewlett-Packard	SuperDome/HyperPlex	Research	Korea, South	2001	148.80	96	211.20			Myrinet
434	NVON BV	Hewlett-Packard	SuperDome/HyperPlex	Industry	Netherlands	2001	148.80	96	211.20			Myrinet
435	Netsiel S.P.A.	Hewlett-Packard	SuperDome/HyperPlex	Industry	Italy	2001	148.80	96	211.20			Myrinet
436	POSCO	Hewlett-Packard	SuperDome/HyperPlex	Industry	Korea, South	2001	148.80	96	211.20			Myrinet
437	Service Company	Hewlett-Packard	SuperDome/HyperPlex	Industry	Japan	2001	148.80	96	211.20			Myrinet
438	Service Company	Hewlett-Packard	SuperDome/HyperPlex	Industry	Japan	2001	148.80	96	211.20			Myrinet
439	Talk America	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	148.80	96	211.20			Myrinet
440	UPS	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	148.80	96	211.20			Myrinet
441	Prudential Insurance	IBM	SP Power3 375 MHz	Industry	United States	2000	148.00	144	216.00			SP Switch
442	University of Manchester	IBM	SP Power3 375 MHz	Academic	United Kingdom	2001	148.00	144	216.00			SP Switch
443	Alliant Energy	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	147.10	96	211.20			Myrinet
444	American Airlines	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2000	147.10	96	211.20			Myrinet
445	American Airlines	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	147.10	96	211.20			Myrinet
446	American Airlines	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	147.10	96	211.20			Myrinet
447	American Airlines	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	147.10	96	211.20			Myrinet
448	Bell Canada	Hewlett-Packard	SuperDome/HyperPlex	Industry	Canada	2001	147.10	96	211.20			Myrinet
449	CGI	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	147.10	96	211.20			Myrinet
450	Equiva	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	147.10	96	211.20			Myrinet
451	Equiva	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	147.10	96	211.20			Myrinet
452	Forsythe & Mearthur	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	147.10	96	211.20			Myrinet
453	Hutchison Telecom	Hewlett-Packard	SuperDome/HyperPlex	Industry	France	2001	147.10	96	211.20			Myrinet
454	Hutchison Telecommunications	Hewlett-Packard	SuperDome/HyperPlex	Industry	Japan	2001	147.10	96	211.20			Myrinet
455	Mannesmann Arcor	Hewlett-Packard	SuperDome/HyperPlex	Industry	Germany	2001	147.10	96	211.20			Myrinet
456	Nike	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	147.10	96	211.20			Myrinet
457	Nike	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	147.10	96	211.20			Myrinet
458	Sprint	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	147.10	96	211.20			Myrinet
459	Sprint PCS	Hewlett-Packard	SuperDome/HyperPlex	Industry	United States	2001	147.10	96	211.20			Myrinet
460	IBM	IBM	Netfinity Cluster PIII 1 GHz - Myrinet	Vendor	United States	2001	147.00	256	256.00			Myrinet
461	University of British Columbia	IBM	Netfinity Cluster PIII 1 GHz - Myrinet	Academic	Canada	2001	147.00	256	256.00			Myrinet
462	Manufacturing Company	IBM	SP Power3 375 MHz	Industry	Japan	2000	146.00	142	213.00			SP Switch
463	General Motors	Hewlett-Packard	SuperDome 750 MHz/HyperPlex	Industry	United States	2002	144.80	72	216.00			Myrinet
464	Simon Fraser University	Self-made	AMD MP 1.2 GHz - Ethernet	Academic	Canada	2002	144.60	192	460.80	76120	26800	Fast Ethernet
465	ROWIKA / Pulsen	IBM	SP Power3 375 MHz	Industry	Sweden	2001	144.00	140	210.00			SP Switch
466	Institute of Statistical Mathematics	Hitachi	SR8000/20	Research	Japan	1999	144.00	20	160.00	48000	4000	Crossbar
467	Chemical Company	IBM	SP S80s 450 MHz	Industry	Germany	2000	139.00	294	264.60			N/A
468	Bank	IBM	Netfinity Cluster PIII 1 GHz - Eth	Industry	France	2001	138.00	320	320.00			Ethernet
469	DeTeCSM	IBM	SP PC604e 332 MHz	Industry	Germany	2000	138.00	452	300.10			SP Switch
470	DeTeCSM	IBM	SP PC604e 332 MHz	Industry	Germany	2000	138.00	452	300.10			SP Switch
471	CASPUR	IBM	SP Power3 375 MHz 16 way	Academic	Italy	2001	138.00	128	192.00	76000	16000	SP Switch
472	CINECA	IBM	SP Power3 375 MHz 16 way	Academic	Italy	2000	138.00	128	192.00	76000	16000	SP Switch
473	SARA (Stichting Academisch Rekencentrum)	IBM	SP Power3 375 MHz 16 way	Academic	Netherlands	2001	138.00	128	192.00	76000	16000	SP Switch

Rank	Site	Manufacturer	Computer	Inst. type	Country	Year	Rmax	Processors	Rpeak	Nmax	Nhalf	Interconnect
474	Toshiba Corp - Power Systems & Service Company	IBM	SP Power3 375 MHz 16 way	Industry	Japan	2002	138.00	128	192.00	76000	16000	SP Switch
475	University of Victoria	IBM	SP Power3 375 MHz 16 way	Academic	Canada	2001	138.00	128	192.00	76000	16000	SP Switch
476	Duke Energy	IBM	pSeries 690 1.1GHz GigEth	Industry	United States	2002	137.10	64	281.60	80000	13500	Gigabit Ethernet
477	Wiliams Energy	IBM	pSeries 690 1.1GHz GigEth	Industry	United States	2002	137.10	64	281.60	80000	13500	Gigabit Ethernet
478	Bank	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	United States	2000	137.10	256	204.80			N/A
479	Clearstream Services	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	Luxembourg	2002	137.10	256	204.80			N/A
480	Clearstream Services	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	Luxembourg	2002	137.10	256	204.80			N/A
481	E-commerce	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	United States	2000	137.10	256	204.80			N/A
482	EDS	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	Canada	2002	137.10	256	204.80			N/A
483	Ford Motor Company	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	United States	2000	137.10	256	204.80			N/A
484	GTE Communications	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	United States	2000	137.10	256	204.80			N/A
485	GTE Communications	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	United States	2000	137.10	256	204.80			N/A
486	Gateway	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	United States	2000	137.10	256	204.80			N/A
487	Information Technology Company	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	Germany	2001	137.10	256	204.80			N/A
488	MobilCom	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	Germany	2001	137.10	256	204.80			N/A
489	MobilCom	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	Germany	2001	137.10	256	204.80			N/A
490	Motorola	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	United States	2000	137.10	256	204.80			N/A
491	New York City - Human Resources	Sun Microsystems	HPC 10000 400 MHz Cluster	Government	United States	1999	137.10	256	204.80			N/A
492	Sun	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	United States	2000	137.10	256	204.80			N/A
493	Telecommunication Company	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	United States	2001	137.10	256	204.80			N/A
494	Telecommunication Company	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	United States	2001	137.10	256	204.80			N/A
495	Telecommunication Company	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	South Africa	2001	137.10	256	204.80			N/A
496	Telecommunication Company	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	South Africa	2001	137.10	256	204.80			N/A
497	Telecommunication Company	Sun Microsystems	HPC 10000 400 MHz Cluster	Industry	South Africa	2001	137.10	256	204.80			N/A
498	US Army Research Laboratory (ARL)	Sun Microsystems	HPC 10000 400 MHz Cluster	Research	United States	1999	137.10	256	204.80			N/A
499	Kaiser Foundation	IBM	SP Power3 375 MHz	Industry	United States	2000	136.00	132	198.00			SP Switch
500	University of Maine	Microway	Pentium 3 Cluster 1.0 GHz	Academic	United States	2002	134.30	208	208.00	98000	12300	Fast Ethernet