

## June 2016

Following is the ranking of the systems in terms of Rmax (Linpack Benchmark performance). For systems with high Rpeak (theoretical peak performance) and without Rmax, visit [Rpeak-only Systems](#).

- C - CPUs, G-GPUs, ICO - Intel Co-processors. Cores (4th column) that are not qualified with C/G/ICO refer to CPUs.
- OEM - Original Equipment Manufacturer, SI - System Integrator

Rank	Site	System	Cores/Processor Sockets/Nodes	Rmax (TFlops)	Rpeak (TFlops)
1	<a href="#">Supercomputer Education and Research Centre (SERC), Indian Institute of Science (IISc), Bangalore</a>	<a href="#">Cray XC-40 Cluster (1468 Intel Xeon E5-2680 v3 @ 2.5 GHz dual twelve-core processor CPU-only nodes, 48 [Intel Xeon E5-2695v2 @ 2.4 Ghz single twelve-core processor+Intel Xeon Phi 5120D] Xeon-phi nodes, 44 [Intel Xeon E5-2695v2 @ 2.4 Ghz single twelve-core processor+NVIDIA K40 GPUs] GPU nodes) w/ Cray Aries Interconnect. HPL run on only 1296 CPU-only nodes.</a> OEM: Cray Inc., Bidder: Cray Supercomputers India Pvt. Ltd.	36336C + 2880ICO + 126720G/ 3028C + 48ICO + 44G/ 1560C + 48ICO + 44G	901.51 (CPU-only)	1244.00 (CPU-only)
2	<a href="#">Indian Institute of Tropical Meteorology, Pune</a>	IBM/Lenovo System X iDataPle DX360M4, Xeon E5-2670 8C 2.6 GHz, Infiniband FDR OEM: IBM/Lenovo, Bidder: IBM India Pvt. Ltd.	38016/ /	719.2	790.7
3	<a href="#">Indian Lattice Gauge Theory Initiative, Tata Institute of Fundamental Research (TIFR), Hyderabad</a>	<a href="#">Cray XC-30 cluster (Intel Xeon E5-2680 v2 @ 2.8 GHz ten-core CPU and 2688-core NVIDIA Kepler K20x GPU nodes) w/Aries Interconnect</a> OEM: Cray Inc., Bidder: Cray Supercomputers India Pvt. Ltd.	4760C + 1279488G/ 476C + 476G/ 476C + 476G	558.7	730.00
4	<a href="#">Indian Institute of Technology, Delhi</a>	<a href="#">HP Proliant XL230a Gen9 and XL250a Gen9 based cluster (Intel Xeon E5-2680v3 @ 2.5 GHz dual twelve-core CPU and dual 2880-core NVIDIA Kepler K40 GPU nodes) w/Infiniband</a> OEM: HP, Bidder: HP	10032C + 927360G/ 836C + 322G/ 418C + 161G	524.40	861.74
5	<a href="#">Center for Development of Advanced Computing (C-DAC), Pune</a>	<a href="#">Param Yuva2 System (Intel Xeon E5-2670 (Sandy Bridge) @ 2.6 GHz dual octo-core CPU and Intel Xeon Phi 5110P dual 60-core co-processor nodes) w/Infiniband FDR</a> OEM: Intel, Bidder: Netweb Technologies	3536C + 26520 ICO/ 442C + 442 ICO/ 221C + 221 ICO	388.44	520.40
6	<a href="#">CSIR Fourth Paradigm Institute (CSIR-4PI), Bangalore</a>	<a href="#">HP Cluster Platform 3000 BL460c (Dual Intel Xeon 2.6 GHz eight core E5-2670 w/Infiniband FDR)</a> OEM: HP, Bidder: HCL Infosystems Ltd.	17408/2176/1088	334.38	362.09
7	<a href="#">National Centre For Medium Range Weather Forecasting, Noida</a>	IBM/Lenovo System X iDataPlex DX360M4, Xeon E5-2670 8C 2.6 GHz, Infiniband FDR OEM: IBM/Lenovo, Bidder: IBM India Pvt. Ltd.	16832/ /	318.4	350.1
8	<a href="#">Indian Institute of Technology, Kanpur</a>	<a href="#">Cluster Platform SL230s Gen8, Intel Xeon E5-2670v2 10C 2.5 GHz, Infiniband FDR.</a> OEM: HP, Bidder: HP	15360/1536/768	295.25	307.2
9	<a href="#">Vikram Sarabhai Space Centre (VSSC), Indian Space Research Organization (ISRO), Trivandrum</a>	<a href="#">HP and Wipro Heterogeneous Cluster (dual Intel Xeon E5530 quad core and dual Intel Xeon E5645 hexa core CPUs, and dual 448-core NVIDIA C2070 and dual 512-core M2090 GPUs) w 40 Gbps Infiniband network</a> OEM: HP&Wipro, Bidder: HP&Wipro	3100C + 301824G/ 640C + 640G/ 320C + 320G	188.7	394.76
10	<a href="#">Oil and Natural Gas Corporation (ONGC), Dehra Dun</a>	<a href="#">Fujitsu cluster (Intel Xeon E5-2670v3 @ 2.3 GHz dual twelve-core processor nodes) w/Infiniband</a> OEM: Fujitsu, Bidder: Wipro	6240/520/260	182.09	229.63
11	<a href="#">Tata Consultancy Services Pvt. Ltd., Pune</a>	<a href="#">HP Cluster Platform 3000 BL460c (Dual Intel Xeon 3 GHz quad core E5365 (Clovertown) w/Infiniband 4X DDR)</a> OEM: HP, Bidder: HP	14400/3600/1800	132.80	172.60
12	<a href="#">Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore</a>	<a href="#">HPC cluster (Intel Xeon E5-2680v3 @ 2.5 GHz dual twelve-core processor nodes) w/Infiniband</a> OEM: IBM/Lenovo, Bidder: Wipro	2592/216/108	77.13	103.68
13	<a href="#">Indian Institute of Technology, Madras, Chennai</a>	<a href="#">IBM/Lenovo System X iDataPlex dx360 M4 Server Cluster (Intel(R) Xeon(R) CPU E5-2670 @ 2.6 GHz dual octo-core processor nodes w/Infiniband)</a> OEM: IBM/Lenovo, Bidder: SBA Info Solutions	4672/584/292	75.5	97.2
14	<a href="#">Aeronautical Development Agency, DRDO, Bangalore</a>	<a href="#">Fujitsu Cluster PRIMERGY CX250 S2 Cluster (Intel Xeon E5-2697v2 @ 2.7 GHz dual twelve-core compute nodes) w/ Mellanox FDR Infiniband</a> OEM: Fujitsu, Bidder: Tata Elxsi	3072/256/128	60.55	66.35

15	<a href="#">S.N. Bose National Centre for Basic Sciences, Kolkata</a>	<a href="#">Cray XE6 cluster (AMD Opteron 6300 Series (ABU DHABI) @2.4 GHz dual sixteen-core processor nodes w/Cray's Gemini primary interconnect)</a> OEM: Cray Inc. Bidder: Cray Supercomputers India Pvt. Ltd.	7808/488/244	60.00	74.95
16	<a href="#">Physical Research Lab (PRL), Ahmedabad</a>	<a href="#">IBM/Lenovo NeXtScale System (Intel Xeon Processor E5-2670 v3 @ 2.355 GHz dual twelve-core processor CPU nodes. Twenty nodes also contain dual 2880-core NVIDIA K40 GPUs) w/ 4X FDR Infiniband primary interconnect</a> OEM: Lenovo/IBM, Bidder: TCS Ltd.	2328C + 115200G/ 194C + 40G/ 97C + 20G	55.60 (CPU-only) ----- 51.61 (GPU-only)	68.00 (CPU-only) ----- 74.86 (GPU-only)
17	<a href="#">Indian Institute of Tropical Meteorology, Pune</a>	<a href="#">IBM cluster (IBM P6 4.7 GHz sixteen dual-core processor 575 nodes w/Infiniband 4X)</a> OEM: IBM Corp., Bidder: HCL Infosystems Ltd.	3744/480/117	45.84	66.18
18	<a href="#">Research Centre Imarat Hyderabad</a>	<a href="#">HP cluster (Intel Xeon E5-2670 @ 2.6 GHz dual octo-core CPU nodes) w/Infiniband QDR</a> OEM: HP, Bidder: HP	2432/304/152	41.95	50.58
19	<a href="#">Center for Development of Advanced Computing (C-DAC), Pune</a>	<a href="#">PARAMcluster (Intel Xeon (Tigerton) 2.93 GHz quad core quad processor X73xx nodes w/Infiniband)</a> OEM: HP, Bidder: HP	4608/1152/288	38.1	53.63
20	<a href="#">Space Applications Centre (SAC), ISRO, Ahmedabad</a>	<a href="#">HP Proliant DL360Gen9/DL380Gen9 Servers (Intel Xeon E5-2699v3 @ 2.3 GHz dual eighteen-core processor nodes) w/Infiniband 4x FDR Interconnect</a> OEM: HP, Bidder: TCS Ltd.	1368 C + 244 ICO / 76 C + 4 ICO / 38 C+2 ICO	36.67 (CPU-only)	50.34 (CPU-only)
21	<a href="#">Indian Institute of Science Education and Research, Bhopal</a>	<a href="#">IBM/Lenovo System X iDataPlex dx360 M4 Server Cluster (Intel(R) Xeon(R) CPU E5-2670 @ 2.6 GHz dual octo-core processor nodes w/Infiniband)</a> OEM: IBM/Lenovo, Bidder: Locuz Enterprise Solutions Ltd.	2112/264/132	35.36	43.92
22	<a href="#">Indian Institute of Technology, Delhi</a>	<a href="#">HP SL250 G8 based cluster (Intel Xeon E5-2670 @ 2.6 GHz dual octo-core CPU and dual 2496-core NVIDIA Kepler K20 GPU nodes) w/Infiniband FDR</a> OEM: HP, Bidder: Wipro	256C + 79872G/ 32C + 32G/ 16C + 16G	32.27	42.75
23	<a href="#">Indian Agricultural Statistics Research Institute, Delhi</a>	<a href="#">HP SL390 G7 based cluster (Intel Xeon X5675 @ 3.06 GHz dual six-core processor nodes) w/Infiniband QDR</a> OEM: HP, Bidder: HP	3072/512/256	32.21	37.60
24	<a href="#">Aeronautical Development Agency, DRDO, Bangalore</a>	<a href="#">HP Cluster Platform 3000 SL (Dual Intel Xeon 2.93 GHz hexa core X5670 w/Infiniband 4X QDR)</a> OEM: HP, Bidder: RTTS	3072/512/256	31.29	36.00
25	<a href="#">Raja Ramanna Centre for Advanced Technology (RRCAT), Indore</a>	<a href="#">HP Proliant BL460c Gen 8 Cluster (Intel Xeon E5-2697v2 @ 2.7 GHz dual twelve-core compute nodes) w/ Mellanox FDR Infiniband</a> OEM: HP, Bidder: Micropoint Computers	1536/128/64	29.88	33.17
26	<a href="#">Indian Institute of Science Education and Research (IISER), Pune</a>	<a href="#">HP Proliant G8 Cluster (Intel Xeon E5-2680v2 @ 2.8 GHz dual ten-core compute nodes) w/ dual 4X FDR Infiniband interconnect</a> OEM: HP, Bidder: Wipro	1420/142/71	27.16	30.91
27	<a href="#">Harish-Chandra Research Institute (HRI), Allahabad</a>	<a href="#">Fujitsu PRIMERGY HPC Cluster (Intel Xeon Processor E5-2680v3 CPU @ 2.5 GHz dual twelve-core processor nodes) w/Infiniband QDR</a> OEM: Fujitsu Corp., Bidder: Locuz Enterprise Solutions Ltd.	960/80/40	25.26	38.40
28	<a href="#">National Automotive Testing and R&amp;D Infrastructure Project (NATRIP), Delhi</a>	<a href="#">Fujitsu PRIMERGY HPC Cluster (Intel Xeon Processor E5-2670 CPU @ 2.6 GHz dual octo-core processor nodes) w/Infiniband FDR</a> OEM: Fujitsu, Bidder: Wipro	1376/172/86	24.86	28.62
29	<a href="#">CSIR Fourth Paradigm Institute (CSIR-4PI), Bangalore</a>	<a href="#">SGI Altix ICE 8400 EX cluster (Intel Xeon CPU X5670 2.93 GHz dual six-core processor nodes w/Infiniband)</a> OEM: SGI, Bidder: Locuz Enterprise Solutions Ltd.	2304/384/192	23.83	27.0
30	<a href="#">Tata Institute of Fundamental Research (TIFR), Mumbai</a>	<a href="#">IBM Blue Gene Solution, BlueGene/P (IBM PowerPC 850 MHz 450 processors w/Proprietary Interconnect)</a> OEM: IBM Corp., Bidder: IBM India Pvt. Ltd.	8194/2048/2048	23.25	27.85
31	<a href="#">Aeronautical Development Agency, DRDO, Bangalore</a>	<a href="#">HP SL250 G8 based cluster (Intel Xeon E5-2665 @ 2.4 GHz dual octo-core CPU and dual 512-core NVIDIA M2090 GPU nodes) w/Infiniband FDR</a> OEM: HP, Bidder: RTTS	480C + 30720G/ 60C + 60G/ 30C + 30G	23.0 (GPU-only)	39.9 (GPU-only)
32	<a href="#">Aerospace Engineering, Indian Institute of Science, Bangalore</a>	<a href="#">IBM Lenovo Nextscale nx360M5 Cluster (Intel Xeon E5-2680v3 @ 2.5 GHz dual twelve-core processor nodes) w/Infiniband FDR</a> OEM: IBM Lenovo, Bidder: IBM Lenovo	720/60/30	22.95	28.8
33	<a href="#">Institute for Plasma Research (IPR), Gandhinagar</a>	<a href="#">HP Proliant XL250 Gen9 based cluster (Intel Xeon E5-2695v3 @ 2.3 GHz dual fourteen-core processor nodes) w/Infiniband</a>	756/54/27	20.71	27.82

[FDR](#)

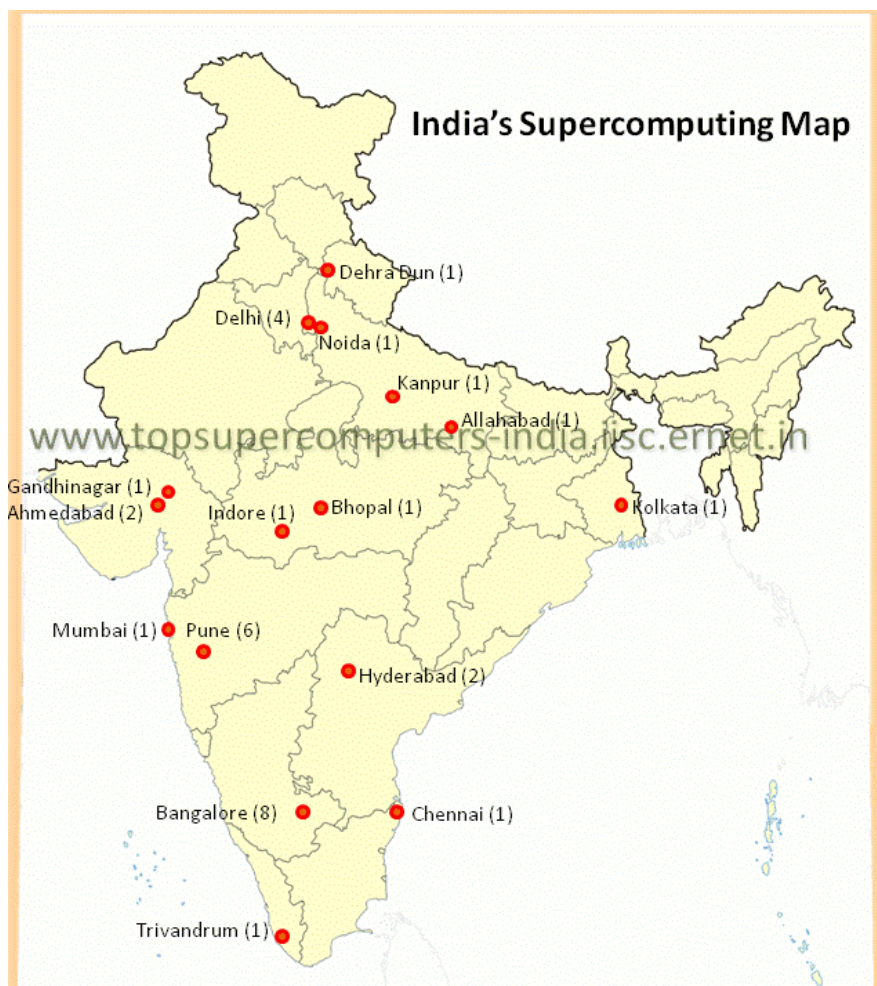
OEM: HP, Bidder: HP

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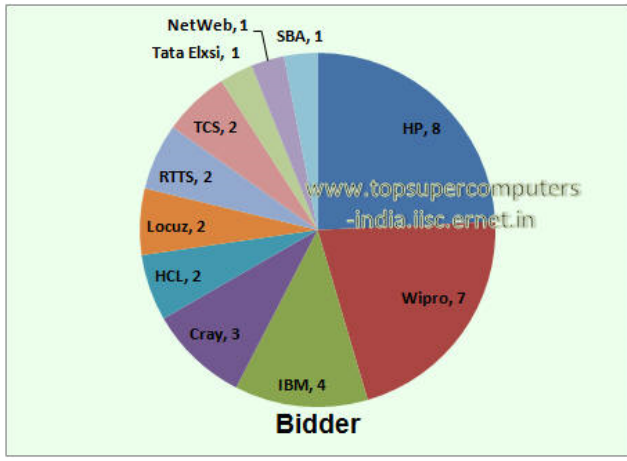
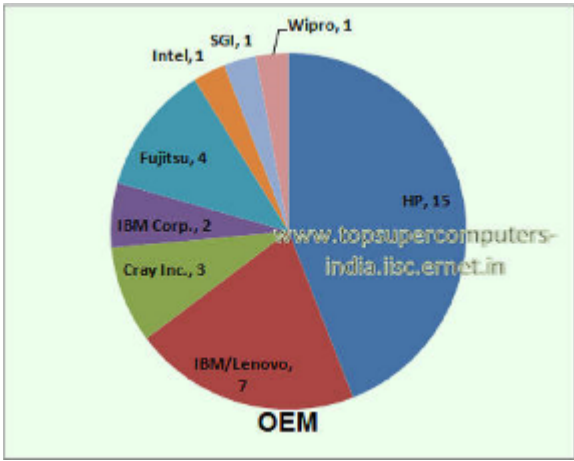
Rank	Site	System	Cores/Processor Sockets/Nodes	Rpeak (TFlops)
1	<a href="#">Indian Institute of Technology, Kanpur</a>	<a href="#">HP Cluster Platform 3000 BL (Dual Intel Xeon 2.93 GHz quad core X5570 w/Infiniband 4X QDR)</a>	2944/736/368	34.50

## Summary

- The combined supercomputing of the nation is 5.39 Peta Flops.
- The performance criteria is minimum of 20 TFlops. The list has three new entries.
- The average performance in the list is about 163.25 TFlops.
- Bangalore leads the list in the number of supercomputers, with eight supercomputers. There are new entries including Dehra Dun and Ahmedabad. Below is the supercomputing map of India.



- HP leads the list as both the Original Equipment Manufacturer (OEM) and as the Bidder. Following is the distribution.



• Following is the distribution of processor architecture.

