China has over 100 more supercomputers than US, Top500 says

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IBM owns the world's two fastest supercomputers in the world.

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China is home to 219 of the world's supercomputers while the US houses 116, the latest report from Top500 says. But the two highest-powered supercomputers are still Summit and Sierra, owned by IBM in the US.

Supercomputers, massive computing machines, are used for power-intensive programs like quantum physics, forecasting global climate change effects, designing engines and aircraft, reconstructing the history of the universe and examining whether old nuclear weapons could still explode.

Only petaflop systems made the list for the first time ever, Top500, which ranks the highest-performing computer systems in the world twice a year, said.

"The total aggregate performance of all 500 system has now risen to 1.56 Exaflops," Top500 said.

China took the third and fourth most powerful supercomputer spots, with Sunway TaihuLight and Tianhe-2A (Milky Way-2A). They were developed by China's National Research Center of Parallel Computer Engineering & Technology, and China's National University of Defense Technology, respectively.

Another US supercomputer took out the fifth spot, with Dell's Frontera in Texas becoming the newest member of the global top 10. Switzerland, Japan and Germany also house supercomputers ranked in the top 10.

There are 29 of the top 500 supercomputers in Japan, 19 in France, 18 in the UK, 14 in Germany, 13 in Ireland and Netherlands, eight in Canada and five in Singapore.

Intel now provides 96% of all supercomputers with processors, Top 500 said.

In terms of "green" supercomputers, Japan's Shoubu system B was ranked the most power efficient.

The fastest ever supercomputer is expected to come to the US in 2021 in the form of a new entrant called Frontier, a $600 million machine with Cray and AMD technology.

Frontier should be able to perform 1.5 quintillion calculations per second, a level called 1.5 exaflops and enough to claim the performance crown, the US Energy Department announced in May.
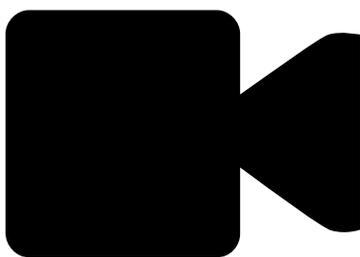
Since then, Hewlett Packard Enterprise announced it would acquire Cray and consolidate their supercomputer power.

Cray is responsible for 39 supercomputers on the list, while HPE has 40. Combined, they would outnumber second-placed maker Inspur, which has 71 supercomputers on the list, but not first-placed Lenovo, which has the majority by far at 173.

On Monday, Nvidia also unveiled the DGX SuperPOD supercomputer, which will be the 22nd fastest in the world. It will be used to train the algorithms and neural networks used for autonomous vehicle development.

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