

U.S. Blacklists More Chinese Tech Companies Over National Security Concerns

By Ana Swanson, Paul Mozur and Steve Lohr

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WASHINGTON — The Trump administration added five Chinese entities to a United States blacklist on Friday, further restricting China’s access to American technology and stoking already high tensions before a planned meeting between President Trump and President Xi Jinping of China in Japan next week.

The Commerce Department announced that it would add four Chinese companies and one Chinese institute to an “entity list,” saying they posed risks to American national security or foreign policy interests. The move essentially bars them from buying American technology and components without a waiver from the United States government, which could all but cripple them because of their reliance on American chips and other technology to make advanced electronics.

The entities are one of China’s leading supercomputer makers, Sugon; three subsidiaries set up to design microchips, Higon, Chengdu Haiguang Integrated Circuit and Chengdu Haiguang Microelectronics Technology; and the Wuxi Jiangnan Institute of Computing Technology. They lead China’s development of high-performance computing, some of which is used in military applications like simulating nuclear explosions, the Commerce Department said.

Other Chinese companies that have been barred from access to American technology include the telecom equipment giant Huawei, which was added to the entity list in May. The Trump administration is also considering adding Hikvision, a surveillance-technology company, The New York Times has reported.

The restriction of additional companies could further complicate efforts to reach a trade deal. American and Chinese officials recently restarted talks after negotiations collapsed in May, with Mr. Trump accusing China of breaking a previous deal and the two countries intensifying their tariff fight.

This week, Mr. Trump said he would have an “extended meeting” with Mr. Xi at the Group of 20 summit next week in Osaka, Japan — a conversation that could determine whether the trade war ends or persists indefinitely.

“It’s ill timed,” said William Reinsch, a former United States trade official and now a senior adviser at the Center for Strategic and International Studies. “It clearly will be received negatively by the Chinese.”

A fast resolution to the trade war was already looking unlikely. Both sides have escalated their language on remaining tough in trade talks, and China has said it is putting together its own “unreliable entities list” of foreign companies and people, an apparent first step toward retaliating against the denial of vital American technology to Chinese companies.

The United States has begun targeting Chinese tech companies that rely on American products as it seeks to thwart China’s efforts to dominate advanced technologies that could have military applications.

Supercomputing is one of the key technologies of the future that China is seeking to dominate, in addition to artificial intelligence and quantum computing. America is home to the world’s fastest computer, at the Oak Ridge

National Laboratory in Tennessee, but China is building more of the ultrafast machines than any other country.

Sugon is one of China's most important makers of high-performance computers and servers. The machines serve China's government and its largest technology companies, powering everything from military simulations to weather prediction.

In most cases, the computers rely on a mix of microchips from the American manufacturers Intel and Nvidia. By placing Sugon on the list, the Trump administration is effectively cutting it off from the tiny brains it needs to make the billions of calculations required to model weather patterns and support video apps and online shopping.

One of the blacklisted subsidiaries had formed a partnership with the American chip maker Advanced Micro Devices to create microchips that could satisfy security demands for Chinese government customers. Some Chinese officials said the chips could be used in a new generation of faster supercomputers. By relying on chips made by AMD and Intel, Sugon's supercomputers can run a wider array of software than some of the country's faster computers built around domestically produced chips.

With just over \$1 billion in revenue last year, Sugon is tiny compared with the previously blacklisted Huawei. Still, its exclusion from American technology is an especially bitter pill for Beijing to swallow, as its supercomputers form the core of some of the Chinese government's most sensitive and important systems.

Sugon supercomputers support State Grid, the monopoly that runs China's electric grid; China Mobile, the country's largest telecom services provider; and the China Meteorological Administration. It also makes data centers for companies like the e-commerce giant JD.com and Bytedance, the owner of the social media app TikTok.

The companies could petition the United States government for a license to buy American technology, but their addition to the list suggests that they would receive intense scrutiny and that approval might be unlikely.

For years, chip companies like Intel have sold widely available microchips to supercomputer makers in China, even some with close ties to the military. In 2015, the Commerce Department moved to add China's National University of Defense and Technology to the entity list, to cut it off from using Intel chips in supercomputers that the United States government said were being used to model nuclear detonations.

On Friday, the list was updated with a number of new addresses and names through which the National University of Defense Technology was procuring chips. According to China's official list of its fastest supercomputers, the institute still runs two of China's three fastest supercomputers on Intel processors.

In its current order, the Commerce Department highlights the next frontier in supercomputing: "exascale" machines, which China, the United States and other nations are racing to build. They will be five times as fast as the fastest machine today — the Summit, which is housed at Oak Ridge and was built by IBM in a partnership with Nvidia.

The Commerce Department order cites the three groups "leading China's development of exascale high-performance computing": Sugon, the Wuxi Jiangnan Institute of Computing Technology and the National University of Defense Technology.

These three companies are all developing prototype exascale machines in China that are powered by Chinese-made microprocessors, said Jack Dongarra, a supercomputer expert at the University of Tennessee and a co-creator of the Top 500 list of the swiftest machines.

But other key technologies in the fastest supercomputers will be affected. Supercomputers are made by lashing together thousands of processors, linked by a specialized fabric of digital circuitry known as interconnect technology. The leading producer of high-performance interconnect technology is Mellanox, an Israeli company that Nvidia agreed this year to buy for \$6.9 billion.

“The interconnect technology is as important if not more important than the processors,” Mr. Dongarra said. “The impact of this government order is going to be far-reaching.”

It is likely to hamper the Chinese in the short run, he said, but also encourage China to redouble its efforts to replace American technology.

Ana Swanson reported from Washington, Paul Mozur from Shanghai, and Steve Lohr from New York.

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